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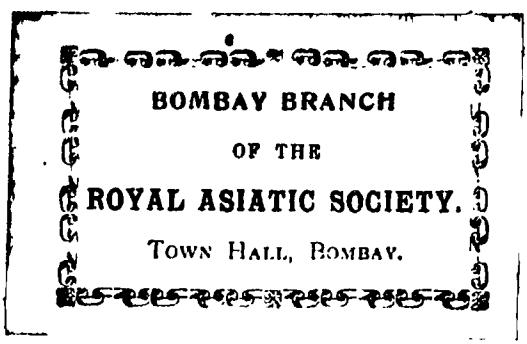

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PRINCIPLES OF PSYCHOLOGY.

Οἰκεῖ μὲν ἐν τῷ σώματι ψυχὴ, οὐκ ἔστι δὲ ἐκ τοῦ σώματος.

ΕΠΙΣΤΟΛΗ ΠΡΟΣ ΔΙΟΓΝΗΤΟΝ.

PRINCIPLES OF PSYCHOLOGY

IN THREE PARTS.

BY GEORGE RAMSAY B.M.

AUTHOR OF "AN INTRODUCTION TO MENTAL PHILOSOPHY,"
"ANALYSIS AND THEORY OF THE EMOTIONS,"
"A CLASSIFICATION OF THE SCIENCES,"
ETC. ETC.

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PREFACE

It is now just four years since I published "An Introduction to Mental Philosophy," which may be considered as a suitable preparation for the present Work. It appeared to me that before entering upon the thorny paths of metaphysical ground, it was highly desirable to pave the way by "A Philosophical Vocabulary," which should endeavour to fix the meaning of the principal terms used in Philosophy, not in Mental Philosophy only, but in every inquiry worthy of that name. Such are the terms, SUBSTANCE, QUALITY, QUANTITY, RELATION, CAUSE AND EFFECT, LAW OF NATURE, PRINCIPLE, HYPOTHESIS and THEORY, SCIENCE, AND PHILOSOPHY itself. Accordingly, such a Philosophical Vocabulary forms the First Part of the "Introduction," which, but for the Second Part, which treats particularly of *Mental* Philosophy, might have been styled an Introduction to Philosophy in general.

My principal reason for alluding now to the above work is to mention that, with one exception, the present and the former work are perfectly distinct. That exception consists in the Chapter "Of Reasoning." Of course, in a work on Psychology, it was impossible to avoid treating of Reasoning, and as I had discussed the subject

at length in the former work, it was quite allowable, nay, unavoidable, to avail myself in the present work of what I had previously written. But the whole Chapter on Reasoning has been carefully revised, some difference of arrangement introduced, a good deal added, and something omitted, which it seemed unnecessary to repeat. Nay, in one particular an important change has been made, a change of Principle. This is in the sub-section which treats of Probable Reasoning. I had formerly thought that a general proposition or general principle, as it is often called, understood indeed, not expressed, was necessary to the validity of every case of Inductive reasoning: but, on this point, I have changed my opinion, chiefly, I am willing to allow, from a perusal of Mr. Bailey's excellent work on Reasoning, which fell into my hands after the publication of my "Introduction." With the exception of this Chapter on Reasoning, I repeat that the present work is entirely distinct from the former.

This work has at least one claim to attention, that it is one of the very few works in our language which give a connected view of the *whole* of *Pure* Mental Philosophy. Even the great work of Locke barely touches upon that most interesting class of phenomena, the Emotions. Dr. Brown's Lectures on the Philosophy of the Human Mind is the only work in English, which now occurs to me, that treats of all the Mental Phenomena. That a connected view of these phenomena is

desirable, will not be disputed. Of course, Morals are not comprehended in the subject. For these I must refer to my "Principles of Human Happiness and Duty."

I know not whether an apology will be thought necessary for the use of the term *Psychology*. The reader will observe that I have no partiality for new and learned words, but there are cases where they may be useful, if not necessary. And this I consider to be a case in point. The words *Mental Philosophy* are not sufficiently definite, for mental philosophy embraces not only Psychology, but all the Sciences which relate directly to Mind, as Logic, Morals, and even Politics. *Pure* Mental Philosophy would be appropriate; but it is better to have a single word, if possible. The term Metaphysics naturally suggests itself; but, as this word has been employed in so many senses; and is, moreover, unhappily associated in the public mind with much that is cloudy, mystical, if not unintelligible; it seemed desirable to have a word free from all ambiguity, as well as from all unfavourable associations. Besides, the term *Psychology* is no longer quite new, for it has been used by some of our best writers; in particular by Sir Benjamin Brodie in his "Psychological Inquiries." I have therefore resolved to adopt it; though the words Metaphysics and Metaphysical occur occasionally in the following pages, as synonymous with Psychology and Psychological.

It must be allowed that Psychology has been hardly dealt with. It has been attacked not only by foes, but by friends; not only by strangers, but by its own Professors. Now this is too bad. It tempts one to exclaim, *Et tu Brute.* To those, then, if any such there be, who really think that nothing has been, or can be done in Psychology, the present work is with some degree of confidence addressed. This shall be my only answer. Though the work may have many faults, and no doubt it has many, yet I venture to hope that it will be found to contain a body of Philosophical doctrine, neither obscure, frivolous, captious, nor unsound; neither Sophistical or Rationalist on the one hand, nor Empirical on the other.[a] Of course I must have profited by the labours of my predecessors, but I think that I have added something to them, that there is here *new* as well as *old,* and that I shall leave Psychology better than I found it.

I certainly have not attempted to construct an edifice unassailable in all its parts, founded on Self-evidence, and raised up by strict demonstration, like pure Mathematics: for any such attempt would have shown a total misapprehension of the nature of the subject. A misapprehension of the nature of his subject, and of the evidence whereof it admits, is the greatest fault which a Philosopher can commit. It is fatal, and fore-

[a] See the *Novum Organum* Aph. LXII-III-IV, where these two kinds of false philosophy are characterised.

dooms to failure all his subsequent labours. Nor have I any wish to be numbered with those, who, "being unable to add any thing to TRUTH, seek for eminence through the heresies of paradox."

It had not been my intention to engage in controversy, but, as the Champion of the "New Scottish Philosophy" has thrown down the gauntlet, I shall not decline taking it up, once for all. *That* Philosophy is professedly demonstrative, and so linked together, as the Author himself allows, that, if one flaw can be detected in it, the whole must fall to pieces. I shall therefore examine but one argument, on which the whole Theory concerning the existence of Matter is founded; for, if that be unsound, no more refutation will be necessary. That argument is contained in Professor Ferrier's last publication, "Scottish Philosophy the Old and the New," and is as follows: (page 27).

"My argument is as follows. The only material world which truly exists, is one which either actually is, or may possibly be, known. But the only material world which either actually is, or may possibly be, known, is one, along with which intelligence is, and must be, also known. Therefore, the only material world which truly exists, is one, along with which, intelligence also exists. Therefore, the *mere* material world has no real and absolute existence. But neither is it a nonentity (I am no idealist), for there is no nonentity, any more than there is entity out of relation to all intelligence. It is simply an expression of nonsense. This is my reasoning, and if any one can propose an amendment on the syllogism, I shall very willingly receive it."

Now, I accept that challenge, and shall pro-

pose two rectifications in the above argument, necessary, as I conceive, to its validity.

First, I must observe that the conclusion above stated is not the correct conclusion from the premises; but the correct conclusion is as follows:

Therefore, the only material world which truly exists, is one, along with which intelligence is, and must be known. The amended argument will then stand thus:

The only material world which truly exists, is one which either actually is, or may possibly be, known;

But the only material world which either actually is, or may possibly be, known, is one along with which intelligence is, and must be, also known;

Therefore, the only material world which truly exists, is one, along with which, intelligence is, and must be, known.

This is the *only* legitimate conclusion from those premises.

Secondly, there is an ambiguity in the above argument, arising from a confusion between the actual and the possible. What is *positively* stated in the first proposition is simply, that the only material world which really exists, is one which may possibly be known; in other words, without involving a contradiction. So, the second proposition cannot rightly imply that the material world actually is known; but merely that, *if known*, intelligence must be known along with it. The

insertion of the words, *if known*, will render the meaning clear; otherwise actual knowledge might be unwarily supposed, as in the fallacious argument it is supposed. Consequently, the argument fully corrected will stand thus:

The only material world which truly exists, is one which either actually is, or may possibly be, known;

But the only material world which either actually is, or may possibly be, known, is one, along with which, (if known) intelligence is, and must be, also known.

Therefore, the only material world which truly exists, is one, along with which, (if known) intelligence is, and must be, also known.

Such is the only legitimate conclusion from the premises; but it is one of no force whatsoever against the independent existence of matter. It merely affirms that if the material world be known, intelligence must be known along with it; which advances us not one step beyond Professor Ferrier's Propositions in his Theory of Knowing, not one step toward Being. He has still to prove that matter cannot exist unless it be known, or, in his own words, that "the only material world which truly exists, is one, along with which, intelligence also exists;" which is quite another proposition.

The Author of the "New Philosophy" has therefore failed in the above attempt to pass logically from Knowing to Being. Between the two

lies a deep mysterious abyss, which we must leap across, for we never can bridge it over.

In his "Institutes of Metaphysic" the same Author endeavours to cross the abyss by filling it up; in plain language, by identifying Being with Knowing. "Thus Knowing and Being," says he, (p. 515) "are shown to be built up out of the same elements." But, if the elements be the same, and if it be not maintained that they are in different proportions, then the compounds, Knowing and Being, must also be the same. This is one way of getting rid of the difficulty, but it is cutting the Gordian knot, instead of untying it.

Again, "matter cannot be the *cause* of our cognitions, inasmuch as it is a mere *part* of our cognitions," (p. 540). All this makes things much worse; for, in order to get rid of a difficulty, we are called upon to efface the distinction between Mind and Matter, which lies at the bottom of all sane Metaphysics. Matter may exist, as all the world supposes, or it may not, as Berkeley thought, and still a Science of Mind be possible; but a system which confounds the two strikes at the root of Mental Philosophy, and hence of all genuine Philosophy whatsoever.

RUGBY, NOVEMBER 21, 1856.

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PRINCIPLES OF PSYCHOLOGY.

PART I

PRELIMINARY.

CHAPTER I.

INTRODUCTION. OF THE MIND IN GENERAL.

1. The difference between MIND and MATTER lies at the bottom of all PSYCHOLOGY; and upon it is founded the distinction between the Mental and the Physical Sciences.

2. This difference is broad and definite, so that Mind can never be mistaken for Matter, or Matter for Mind.

3. In one respect alone do Mind and Matter agree. They agree as SUBSTANCES, that is, as *something permanent among innumerable modifications*:[a] but in everything else they differ.

4. Matter is extended, solid or impenetrable, moveable, divisible without end; but Mind has

[a] See the Author's "Introduction to Mental Philosophy." Art. 1. SUBSTANCE.

neither extension, solidity, mobility in space, nor divisibility. It has no parts, it is strictly One.

5. Mind, on the other hand, is susceptible of Sensations, Thoughts, and Emotions, which have nothing in common with the known properties of Matter. Therefore the separation between Mind and Matter is broad, deep, and sudden.

6. If these distinctions be correct, the all-important question as to the materiality or immateriality of the SOUL is already decided: for how can that be material which has none of the properties of matter?

7. Again, it is allowed that Sensations, Thoughts, and Emotions are not material; but these are merely modifications of the Mind or Soul; therefore the Mind itself is not material.

8. Consequently, from what it has not, as well as from what it has, we draw the same conclusion, that the Mind or Soul is immaterial.

9. Let us conclude this Chapter by observing how important are accurate distinctions at the outset! How many volumes of unprofitable discussion may they prevent!

CHAPTER II.

CLASSIFICATION OF THE MENTAL PHENOMENA.

1. Though the mind is strictly ONE and indivisible, yet it admits of innumerable modifications.

2. These modifications, considered as fleeting or transitory, rapidly succeeding each other in our waking or dreaming hours, are called simply *Phenomena* or *Appearances*; but when from such appearances we infer the existence of some more permanent modification, the source of these appearances, we name it a Mental *Power* or *Faculty*.

3. Mental Powers then, or Faculties, are known only through Phenomena, and, consequently, our first object must be to become well acquainted with these.

4. Without a correct classification of the Mental Phenomena there can be no accurate Psychology; but, with such Classification, the most important questions can be solved without much difficulty. A mistake here is fatal, for it vitiates all subsequent conclusions; while well-

grounded distinctions at the outset may render truth almost self-evident.

5. Some Mental Phenomena comprise more or less of Pleasure or Pain, Happiness or Misery, while others are in themselves neutral. The former we may call FEELINGS, the latter THOUGHTS. This, then, is the first and fundamental distinction.

6. Feelings again are of two sorts, according as they are, or are not, immediately dependant on a change in the state of the Body. The former we call SENSATIONS, the latter EMOTIONS; the immediate antecedent of the one being a bodily change, of the other a mental affection, whether Thought, Sensation, or another Emotion.

7. Sensations then, are, in themselves, Mental Phenomena as much as Emotions, though immediately dependant on the Body. A bodily pain is one of which the cause lies in our material frame; the effect, the pain, being strictly mental.

8. That all Emotions comprise Pleasure or Pain will not be disputed; but do all Sensations likewise?

9. Many Sensations are undoubtedly pleasurable, many painful, even in an intense degree; but others are certainly dull, if felt at all as pleasurable or painful.

10. I touch the table gently with my hand, and I am quite sensible of the touch, but I could hardly say that I feel pain or pleasure. I touch

it again more forcibly, and now I *do feel* pain. Must we then separate these two Phenomena as belonging to different classes? I think not. The pain diminishes gradually with the force of the blow, till it becomes infinitesimally little, the mere *fluxion* of a pain, and nowhere can we find a limit. In other respects the Phenomena are exactly similar, in themselves, and in their antecedents, the difference being only in degree; and therefore, all may be called *Feelings*, the acute as well as the dull.

11. Sensations, then, as well as Emotions, are rightly comprehended under the first grand class of Mental Phenomena, the FEELINGS, and the difference between them has been pointed out. Let us turn now to the other grand class, the THOUGHTS.

12. Though our Emotions, and hence most of the happiness or misery which we feel, spring from our Thoughts, yet, in themselves, these are neutral. Closely united as Cause and Effect, and often in reality inseparable, Thoughts and Emotions may still be distinguished on reflection; and they are in fact distinguished by all people, and in all languages.

13. If Thought and Emotion be so readily and generally distinguished, though so closely united, much more Thought and Sensation, which depends upon the State of Body, and not at all upon Thought.

14. Thus Thoughts are clearly distinguished from our Feelings, that is from Sensations and Emotions, which two make up all our pleasures and pains, all our happiness and misery.

15. Now Thoughts are of two orders, Non-relative and Relative, or NOTIONS and RELATIONS.

16. A Notion supposes but one thing, a Relation two at least.

17. I consider a man, a horse, a tree, a mountain, each separately, and I have a *Notion* of each. I compare one man with another, one horse with another, one tree with another, one mountain with another, and I am conscious of a *Relation* between the two. So, I am aware of a Relation between a mare and foal, a father and son.

18. Notions again are of two sorts, *Particular* and *General*, words which will be fully explained hereafter.[a]

19. The second order of Thoughts consists of Relative Thoughts or Relations.

20. The observation already made with respect to Thoughts and Emotions, that, though readily distinguished on reflection, they are often in reality inseparable, applies to Notions and Relations.

[a] For the further division of Notions, see the Chapter on CONCEPTION.

21. Relations necessarily suppose Notions between which a Relation exists, so that where there are no notions we can be conscious of no relation; but Notions imply not Relation of necessity, though they frequently do in fact.

22. Thus the Mental Phenomena differ from Material elements, which, though at one time combined with other elements, may at another be actually separated by art and examined apart. Common salt is a compound of a gas called Chlorine and a metal Sodium, and these may be obtained from Salt, and exhibited each by itself. This facility we do not enjoy in Psychology, and hence the difficulty of Psychological Analysis.

23. Relations are of three kinds. 1. Those which always and of necessity suppose Time. 2. Those which do not; and 3. Those which may or may not suppose Time. The first are called Relations of Succession, the second Relations of Co-existence, and the third or mixed kind are Relations of Resemblance.

24. Relations of Succession are of two genera, relations of *casual*, and relations of *invariable* antecedence and consequence, the latter comprising the all-important relation of Power or Cause and Effect.

25. Relations of Co-existence are numerous, and when the things compared are Material, Co-existence in Space is always supposed; not so of course when Mental. The heart and lungs bear

to each other an uniform relation of position, and co-exist in Space; so do the elements of a chemical compound, as common salt; not so the elements of a mental compound, as love and gratitude, which co-exist, but not in Space.

26. The whole object of Science is to discover the *invariable* Co-existence, and the *invariable* Succession of things.

27. Having now completed the classification of the Mental Phenomena, so far as requisite for our present purpose, for more detail would be here out of place, we may be able to pass judgment on some of the Psychological systems of our predecessors.

28. If the above classification be correct, it will, in the first instance, show the utter insufficiency of the system of Condillac and his followers, whereby all the Phenomena of Mind were reduced to Sensations, and what he called *transformed* Sensations. We have seen that Sensations are but one order of Mental Phenomena, forming a subdivision of the Class of Feelings, distinct from the other order the Emotions, and differing still more from the second great class the Thoughts. If Sensations might be confounded with Emotions, or *transformed* into them, how could they be assimilated to Notions, which belong to a different class, and still more to Relations, which are even further removed from Sensations? These all agree but in one respect,

that they are Mental Phenomena, in other respects they radically differ. Could it even be shown that all spring originally from Sensation, this would prove nothing; for on the same ground we might prove that Sensation is not of Mind, since it arises from a bodily change. The Cause and the Effect may be widely different. Body acts on Mind and Mind on Body, but the one bears no resemblance to the other. We may therefore safely pronounce the system of Condillac the most narrow, the farthest from nature, the most degrading of any that ever obtained celebrity. It reduces man to the rank of the lower animals, nay below them; for we have every reason to believe that these are not mere creatures of Sensation.

29. The above Classification will also show the insufficiency of the well-known division of Hume into *Impressions* and *Ideas*. The word *Impression*, as used by Hume, seems to include Sensations and Emotions, and so corresponds to our Feelings; and the term *Idea* means, according to him, an Impression revived,—a faint copy of the original. This is his own language. Ideas differ from impressions only in the degree of force and vivacity, and always spring from them; so that where there has been no Impression, there can be no Idea. Ideas then, at most, are equivalent to our Notions, and consequently, of Relations no account is taken in this Classification.

Accordingly, Hume endeavours to confound the distinction between Notion and Relation, as fatal to his theory; for it is evident that Relation, if distinct from Notion, has no prior Impression to which it corresponds. Thus he attempts to prove that "An opinion or belief is a lively Idea related to, or associated with, a present Impression,"[b] and even that "all probable reasoning is nothing but a species of Sensation."[c] Such were the absurd conclusions to which even Hume was led by an imperfect Classification at the outset, and a false theory founded thereon. Starting from the same theory, he was brought to deny the independent existence of many Notions or Ideas which men commonly suppose that they have, such as the Ideas of Space and Time, which he considered as nothing distinct from the Sensations we experience on seeing objects at rest or in motion.[d] This is exactly the error of Condillac repeated. Notions are here confounded with Sensations, as before Relations with Notions. For the same reason Hume denied that we have any idea of Substance, or even of Self; for no impressions

[b] "Treatise of Human Nature." Vol. I., Part iii., Sec. 7.

[c] Id. Sec. 8. I quote from the "Treatise of Human Nature," the earliest and the great Metaphysical work of Hume, containing the full and consistent Statement of his opinions, though it was afterwards given up by the Author, and, as he thought, superseded by his "Essays."

[d] Id. Part ii.

corresponding to these could be shown.[e] These false conclusions may instruct us how important is a correct Classification at first; for on it Theory will and must be built.

30. After refuting, in the First Book, the supposition of *Innate Ideas*, Locke commences the Second Book of his great work by informing us that all our Ideas spring from *Sensation* and *Reflection*, and he divides them accordingly into these two Classes.[f] Here, be it observed, the Theory gives birth to the Classification, and not the Classification to the Theory, as in the system of Hume, which latter is assuredly the proper method.

31. Considered as a Classification of the Mental Phenomena, the division of Locke is manifestly incomplete; for, in the first place, it appears not to include Sensations themselves, which are not the same as Ideas of Sensation, *i. e.*, derived from Sensation. The Sensations of redness, blueness, etc., are not the same as the Ideas or Notions thereof, of which I am conscious when

[e] "Treatise of Human Nature." Part IV., Sec. 5, 6.

[f] After this fundamental distinction, which runs throughout the whole of the Second Book, on the origin of our Ideas, it is difficult to conceive how Locke could ever have been set down as a pure Sensationalist. But so he has been, both at home and abroad, even by writers of eminence, some of whom, however, had perhaps never read a line of him. See on this point, Dugald Stewart's "Dissertation on the Progress of Metaphysical Philosophy," first published in the "Encyclopædia Britannica."

my eyes are shut. So the Sensation which I feel when I touch the table is not the same as the Notions of Extension, Solidity, Hardness, which arise out of the Sensation, and are subsequent to it. Consequently, the Classification of Locke either does not comprehend Sensations at all, or it confounds them with Ideas or Notions of Sensation; and on either supposition the Classification errs, in one case by incompleteness, in the other by confusion.

32. Secondly, we are told that Ideas of Reflection arise from reflecting on the operations of our own minds. But what are these operations themselves? To what class do they belong? Locke ennumerates as such, *perception*, *thinking*, *doubting*, *believing*, *reasoning*, *knowing*, *willing*, and afterwards adds: "The term *operations* here, I use in a large sense, as comprehending not barely the actions of the mind about its *ideas*, but some sort of passions arising sometimes from them, such as the satisfaction and uneasiness arising from any Thought."[g]

The operations of the mind, then, comprehend the Emotions: and consequently, Ideas of Reflection embrace Ideas or Notions of the Emotions, but not the Emotions themselves. The *notion* of love or of gratitude is not the same as love or gratitude *felt*.

[g] "Essay concerning Human Understanding." Book II., Chap. i., Sec. 4.

33. Thus, as Locke's Ideas of Sensation comprise not Sensations proper, so his Ideas of Reflection embrace not the Emotions proper; or should it be said that he meant to include all under the word *Idea*, then it must be allowed that he has not clearly distinguished between Idea proper or Notion and Sensation, in the one case, between Idea or Notion and Emotion in the other. Therefore, again, the Classification errs either by deficiency or by confusion.[h] The truth of Locke's theory, as to the origin of our Ideas, we shall consider afterwards.

34. The Classification which approaches most nearly to the one here proposed is that brought forward by the late Dr. Thomas Brown, in his valuable Lectures on the Philosophy of the Human Mind. Still they differ materially.

35. Dr. Brown begins by dividing all the Mental Phenomena into two great Classes, the Class of External, and that of Internal Phenomena, meaning by the former, Sensations; by the latter, all other Phenomena preceded immediately, not by a change of body, but by a change of mind. These are subdivided into *Intellectual States of*

[h] The confusion between Idea proper or Notion and Passion or Emotion is apparent in Book II., Chapter xx., "Of Modes of Pleasure and Pain." This very meagre chapter is all relative to the Emotions contained in Locke's great work. It may be said, indeed, that he professed only to treat of the Human *Understanding*.

mind or *Thoughts*, and *Emotions*. Thus, while I class Emotions along with Sensations, under the common term *Feelings*, though of different orders, Dr. Brown classes Emotions along with Thoughts, and afterwards separates these two orders. Now the question is, which is the more natural arrangement? Should Emotions be classed with Sensations, or with Thoughts?

36. It will go far to decide this question, if we consider that in popular language we possess a word which embraces both Sensations and Emotions, and them only,—the word *Feeling*; whereas we have no word common to thoughts and Emotions, and to them alone. This is a strong proof that the arrangement here proposed is natural, for all men are more or less metaphysicians. We may or may not be mathematicians, or natural philosophers, but we cannot help knowing something of our own minds. If, then, by common consent, Sensation and Emotion have been classed together under the one term *Feeling*, the probability is that the arrangement is good, particularly if it be confirmed on reflection. So, in French, the word *Sensation* comprises both Sensation proper and Emotion.

37. The only point of agreement between Emotion and Thought, mentioned by Brown, is that both are preceded immediately by a Mental, not by a Bodily change, and thus they are distinguished from Sensation. This, no doubt, is a

difference, and an important one, though it is a difference rather in the antecedent than in the phenomenon itself,—an excellent ground of distinction between the orders of Sensations and Emotions, but hardly sufficient for a primary division. The grand difference between Mental Phenomena is the presence or absence of pleasure or pain, happiness or misery, and on this our Classification is founded; a Classification agreeable to the consciousness of every man, and acknowledged by the general sense of mankind, as expressed in language. Dr. Brown afterwards divides Intellectual states of mind or Thoughts into Simple and Relative Suggestions, which correspond exactly with my Notions and Relations; but he does not propose any subdivision of Simple Suggestions.

CHAPTER III.

ON THE MENTAL POWERS OR FACULTIES.

1. We observed (Chapter ii. 2), that when the modifications of mind are fleeting or transitory, as they rapidly succeed each other in our waking or dreaming hours, we call them *Phenomena* or *Appearances* simply; but when from such appearances we *infer* the existence of some more permanent modification, the source of these appearances, then we name it a Mental *Power* or *Faculty*.

2. From this it is evident that every class of Phenomena has a corresponding Power or Faculty. If we have Sensations, we must possess the Power of Sensation; if Emotions, the Power of Emotion; if Thoughts, the Power of Thinking. This is self-evident. Consequently, the Classification of Mental Powers must be the same as the Classification of Phenomena.

3. Therefore, the three Ultimate or Elementary powers of the mind are, the Powers of Sensation, Emotion, and Thought or Intelligence.

4. From these *Ultimate* elements all the

Proximate Powers are derived, and of them they are compounded; as, in Chemistry, the ultimate elements of Animal and Vegetable Substances, Oxygen, Hydrogen, Carbon, Nitrogen, &c., make up the proximate and complex principles of Albumen, Fibrin, Gelatin, Gluten, Tannin, Wax, Resin, etc.

5. So, out of the elementary Powers of Sensation, Emotion, and Thought, are formed and compounded the proximate Powers of Perception, Imagination, Memory, Will, Conscience or the Moral Faculty, Judgment, Reasoning, etc.

6. To understand the nature of these powers, and their corresponding phenomena, we must analyse them and trace the elements of which they are composed. The Analysis of the Mental Phenomena is the first grand object of Metaphysical inquiry: the second is the Theory of their Origin and Succession. These two ought to be kept distinct as far as we can; though this may not always be possible. A correct Analysis and Classification is the only sure ground for Theory. Locke starts with a theory, viz: that all our Ideas are derived from Sensation and Reflection; and Hume, after his one division into Impressions and Ideas, immediately builds thereon a Theory which determines all his subsequent conclusions.

PART II.

THE FEELINGS.

CHAPTER I.

OF SENSATION.

1. We have seen that *Sensation* and *Emotion* agree, inasmuch as both are *Feelings;* and thus they are distinguished from *Thought* or *Intelligence.*

2. This fundamental difference at once refutes the opinion of a French philosopher, "Penser c'est Sentir, et ce n'est rien que Sentir," "Thought is Feeling, and nothing but Feeling."[a]

3. Feeling, as we have seen, supposes either positive pleasure or pain, happiness or misery; or else such a tendency to them as to become pleasure or pain by a slight increase of intensity, and by imperceptible degrees, without any other

[a] *Destutt de Tracy.* The word *sentir* may comprehend Emotion as well as Sensation, and I have given the author credit for the larger sense; though, as a disciple of Condillac, he probably meant the latter only.

difference in the nature of the phenomena. A slight blow gives no pain, but one a little stronger gives some; a posture at first indifferent becomes irksome by continuation; some light or warmth is agreeable, more is painful. Of the feelings, Sensations alone may be indifferent, Emotions are always pleasurable or painful.

4. This, however, is not the fundamental distinction between Sensation and Emotion. The grand difference is that the former is immediately dependant on the body, the latter on some previous state of mind. The immediate indispensable antecedent of the one is a bodily change, of the other a mental change, whether Sensation, Thought, or some other Emotion.

5. Sensations being the only mental phenomena immediately dependant on the body, it must be through them that we become acquainted with our own bodies, and with the material world in general.

6. Sensations, then, are at least the *inlets* of the world without.

7. But Sensations alone give us no knowledge of the outward world. I feel a Sensation of colour, as of redness and blueness, but the Sensation tells me not that the source thereof lies in an outward material object, totally different from the mind itself, or from any modification of mind. So, I touch the table, and feel a certain Sensation, but this does not inform me that it

arises from contact with an extended solid substance, having no resemblance whatsoever to the Sensation. And neither tastes, nor sounds, nor smells, as I feel them, can give me any information about matter,—a thing utterly different from themselves.

8. We may conclude that had we been creatures of Sensation alone, we never should have known the world without.

9. Sensations rest in themselves; they point not directly to anything else; they are what we feel them and no more; they may be pleasurable, painful, or nearly indifferent; but they tell us of nothing beyond.

10. That knowledge which SENSATION gives not, we obtain by PERCEPTION; which must by no means be confounded with the former, as hitherto has too frequently occurred. Of Perception we shall treat afterwards in its proper place.

11. Sensations constitute the line of demarcation between Mental Philosophy and Physiology: in themselves they belong to the former, but in their antecedents to the latter. A bodily change precedes every Sensation, and that of course is the province of Physiology.[b]

[b] "The examination of our Sensations," says Hume, "belongs more to Anatomists and Natural Philosophers than to moral." Strange misapprehension of the subject of Metaphysics! Sensasations themselves belong to Mental; their antecedents, to Physical science. See "Treatise of Human Nature." Part I., Sec. 2.

12. Since Sensations depend immediately upon a bodily change, it follows that they do not depend upon the Will. This inference is moreover confirmed by experience, for we all know that we cannot directly will the presence or absence of any Sensation. When we open our eyes, we cannot help receiving certain Sensations; and, when we close them, we cannot retain the same. It is only remotely that our will can influence these, that is through the body, and, therefore, with respect to them, the mind is *passive.*

13. Sensations are of various kinds; but they may all be comprehended under two Orders, the *Special* and the *General.*

14. Special Sensations are those to which a special organ is adapted; while General Sensations are such as may arise from any part of the body.

15. The Special Sensations are Sight, Hearing, Smell, Taste: all others are General. Touch, which is commonly classed as one of the five senses, is not confined to any one part, though the hands be its most delicate organ; but this may be owing to use. The hands are the most convenient organs of touch, consequently the most practised, and, therefore, it may be, the most sensitive.

16. The organ of Sight is the eye, and more especially the expansion of the Optic nerve, called the Retina; the organ of Hearing is the ear, par-

ticularly the internal chambers, and their curious bones, the *malleus*, the *incus*, and the *stapes*, with the corresponding nerve, the auditory; the organ of Smell is the delicate and voluminous membrane lining the inner parts of the nose, over which the Olfactory nerve is finely ramified; and the organ of Taste is the tongue and palate, also thickly interspersed with nervous filaments.

17. In every case we know that a nerve is indispensable to Sensation, for if it be cut or injured, the Sense is gone. We infer that all the complicated mechanism is useful only in fitting the nerve to perform its proper functions. Thus, the Pupil, the Humours of the eye, the Lens, serve to admit and refract the rays of Light, so that they may fall duly on the Retina.

18. We can point out the proper nerves of the eye, the ear, the nose, one for each side, or a pair; but we can show no nerves peculiar to Touch, as it has no peculiar organ.

19. An uninterrupted communication between the further extremity of the nerve and the brain, or the spinal marrow, is indispensable to Sensation; for if the communication be interrupted by cutting, or even by pressure, the sense is gone. This we may see, in a partial degree, when a nerve is pressed upon, and the limb becomes *asleep*.

20. This is almost all we know of the bodily process in Sensation; though in the want of real

knowledge, theory has not been idle. Thus the nerves have been compared to musical strings, and a very pretty theory of vibrations has been founded thereon, whereby to explain Sensation. But the nerves are not strings, and their vibrations are imaginary. Again, the nerves have been said to contain animal spirits running up and down to and from the Sensorium, bringing information, like a general's aides-de-camp. But these animal spirits are, like other spirits, to us invisible, and their existence is now given up.

21. We know the uses of the various parts of the eye, how they regulate the admission of light; but of the uses of the various parts of the internal ear, we know nothing, no more than of the convolutions of the brain or of the pineal gland. And as to the action of the nerves, we know only the result.

22. This, however, we do know, that in every case of external Sensation there must be contact. The rays of light must fall upon the retina, the vibrations of air upon the extremities of the auditory nerve, the impalpable effluvia of scents upon the nerves of the nose, savoury bodies must touch the tongue or palate, and tangible objects some part of the frame, before any Sensation can be felt. The eye, ear, and nose *seem* to be conversant with distant objects, but they are not so in reality. The exciting causes of Sight, Hearing, and Smell, are as much in contact with the bodily

organ as the exciting causes of Taste and Touch; and in no case does the mere Sensation give us any knowledge of an outward object, whether near or distant.

23. Having said thus much on the material changes which precede Sensation, let us return to the Mental Phenomena. And first, of the Special Senses. These, as we have seen, are Sight, Hearing, Smell, and Taste.

24. The Sensation proper to Sight is that of Colour; to the Hearing, Sound; to the Smell, Smell; to the Taste, Taste. With respect to the last three, there will be no dispute; but some may suppose that the eye sees more than Colour, namely, objects with their magnitudes and distances.

25. But we have already shown that no Sensation by itself can give us any knowledge of outward objects; and were there any doubt as to the Sight, it would be dispelled by experience; for persons born blind have had their vision perfectly restored by a surgical operation, and yet at first have felt only a Sensation of Colour. And surely there is nothing in mere sounds, smells, or tastes, to tell us from what they come. When these sounds, smells, or tastes are unusual, we cannot even in mature years say whence they are derived. Let a man shut his eyes, and let something tasty, but new, be put into his mouth, and what will he know of it but the taste?

26. These four Special Sensations are commonly of sufficient interest to draw our attention, unless absorbed by thought or emotion, and great pleasure may be derived from them. The charm of Colour, of Music, though much of this is of a higher order, the gratifications of smell and taste, form no contemptible part of our enjoyments.

27. The same can hardly be said of our other or General Sensations. These may be divided into two *genera*, of which Touch is one, while all our other general sensations, various and anomalous as they are, may be comprehended under the second *genus*. Such are the Sensations of warmth and cold, comfort and discomfort, the bodily pleasure of activity and pains of inactivity, the agreeable feelings which accompany good health, the general uneasiness and the innumerable pains of sickness and disease. Pleasurable Sensations of this *order* are not intense, and, therefore, they may attract little attention, though they are important from their permanence; but the pains are some of the worst that flesh is heir to.

28. Sensations of mere Touch in particular are seldom dwelt upon at all, and they are of moment only as leading to Perceptions. Therefore, it is here especially that Sensation and Perception are confounded. The passage from the one to the other is so quick, at all events after

the period of infancy, and the former is in itself so uninteresting, that we cannot wonder if it be often overlooked altogether, or, at least, mixed up with the latter. But, on reflection, we see well that the mere feeling of Touch, and the notion of an outward extended solid body as the cause of that feeling, are mental phenomena widely different, closely united in fact, but readily distinguishable by thought. Nor can we see anything in the mere Sensation of Touch, which should lead us to the knowledge of aught beyond itself.

29. General Sensations, when not amounting to positive pain, seem not to have been intended to fix our attention, and when they do, it is a great evil: for the capacity of the mind is occupied, and distracted from important thoughts. Nothing is more humiliating to man than his subjection to sense. Pain may overcome any one, and pain, in general, is only occasional, but there is such a thing as a subjection to petty sensations, which perpetually divides and weakens the mind. The word *Fidgetiness* expresses this uneasy state.

30. On the other hand, never does the dignity of man more appear than when he triumphs over his Sensations; as the early Christian martyrs who could smile under their torments. So Frederick the Great could read with attention and profit, though in the agonies of gout.[c]

[c] See Lord Dover's "Life of Frederick of Prussia."

31. Sensations are often found combined with other mental phenomena, especially with Emotions; and this combination is called an *Appetite.*

32. The Appetites of hunger and thirst comprehend 1. An uneasy Sensation resulting from the want of food and drink: 2. A desire of relief from that uneasiness. Subsequently there arises a desire of food and drink, as the known remedy for the evil. The last desire is the result of experience, and does not properly belong to the Appetite, which includes only two instinctive feelings, a Sensation and an Emotion, and supposes no acquired knowledge.

33. Sensations are also closely united with a certain class of Thoughts which we call Perceptions, whereby we become acquainted with the material world. So close indeed is the union, at least in the mature mind, that the two are constantly confounded, to the great injury of Mental Philosophy. But of this more hereafter.

34. Sensations cannot be defined, because, being simple feelings, we have nothing more simple by which to explain them; and they are too diversified to admit of accurate description. We talk of Sensations lively or faint, of pains dull or acute; but these epithets convey very inadequate conceptions of what we really feel. I cannot even be quite sure that my Sensations at all correspond with those of other persons; and that what I call green is the same that is felt

by any one else. So long as the same objects rouse the same Sensations in the same persons, the same word will be applied; but this proves not the sameness of Sensation in different persons. It is quite possible, though, no doubt, highly improbable, that the sensation of colour which trees rouse in me may be that which another calls blue; but so long as our respective Sensations do not vary, we shall agree that trees are green.

CHAPTER II.

OF EMOTION.

SECTION FIRST.

OF EMOTION IN GENERAL.

1. The second order of the grand class of Feelings, is that of the Emotions; and these ought next to be treated of, because, as feelings, they are more allied than the Thoughts are to Sensations. Besides, in the order of mental development, Emotion seems prior to Thought, and immediately succeeds Sensation; as in the case of the Appetites, where an Emotion of desire follows instantly on the pain of hunger or thirst. This is probably the first Emotion of the infant mind, and it precedes any exercise of Intelligence.

2. Emotion, as we have seen, agrees with Sensation, inasmuch as both are FEELINGS; but in this they differ, that the latter is always preceded immediately by a change in the state of

the body, the former by a mental change. Therefore Emotion may be defined to be *a Feeling consequent on some mental condition, on some Sensation, Thought, or other Emotion.*

3. As Sensations and Emotions alone are Feelings, in them, and in them only, all our pleasures and pains, all our happiness and misery consist; but principally in the latter. Moreover, these are not only remote incentives, but the immediate cause of all voluntary bodily action. The importance of a knowledge of the Emotions cannot, therefore, be over-stated.

4. We have seen that the Sensations, properly so called, give us no knowledge of external nature, no knowledge of anything but themselves: what we feel them to be, that they are; and having once felt them, we know them ever after. So it is with the Emotions. Some of these, such as Cheerfulness and Melancholy, arise at times in an unaccountable manner, without any evident cause, and lead to no object. These, then, can tell us of nothing but themselves. Others, again, such as Beauty and Sublimity, are supposed to arise from outward objects; but certainly it is not the Emotion that informs us that there are such objects. These Emotions also rest in themselves, and lead us to nothing beyond. And though other Emotions, namely the Desires, do lead us to certain objects, yet the knowledge of the object comes not from the desire, but, on the contrary, the

desire from the previous knowledge of the object. Consequently, Emotions, like Sensations, acquaint us with nothing but themselves; and having once felt them, we know them ever after.

Very different, as we shall find, are the Thoughts, which acquaint us not only with themselves, but also with things quite distinct from themselves, and of another nature. Sensations and Emotions are interesting and important for their own sakes; but Thoughts are interesting from the objects which they contemplate, and the effect of these on our Sensibility.

SECTION SECOND.

CLASSIFICATION OF THE EMOTIONS

1. All the Emotions of the human mind may be divided into two great classes, the PASSIVE, and the ACTIVE Emotions.

2. Passive Emotions are those which do not include Desire or Fear, and which, consequently,

* The Author having already published an "Analysis and Theory of the Emotions," he has resolved to make this Section as concise as possible, and to refer for a fuller account to his former work, from which the present Section is almost entirely taken.

are not immediately connected with outward action. No doubt they *may* lead to outward action, indirectly, and so may every Thought; but they may not, and they never immediately precede it. Such are Cheerfulness, Melancholy, Ennui, Wonder, Beauty, Sublimity, the Ludicrous Emotion, etc.

3. Active Emotions, on the contrary, always comprise Desire or Fear, always urge to action, and when this takes place they are always the immediate antecedents; consequently, the WILL must come under the Active Emotions.

4. Passive Emotions are of two Orders; for some have no necessary connection with our moral conduct, and our social relations; while others, on the contrary, have such a connection. These last are intimately connected with Ethics, and influence practice, leading on to the Active Emotions.

5. Under the first Order may be enumerated simple JOY and GRIEF, with their several species, and varieties, namely, *Cheerfulness*, *Mirth*, *Melancholy*, *Weariness of Mind*, arising from sameness or repetition, and *Ennui* from vacancy of mind. Also under this head come WONDER at what is new; the Emotions of BEAUTY, SUBLIMITY, and the LUDICROUS. All these belong to the first order of the Passive Emotions.

6. Though the above Emotions may have an influence on the conduct, yet the influence is

neither so near, nor so general, as in the case of the Second Order, which, in the usual course of things, leads on to the Active Emotions. These may be called the PASSIVE *Moral* Emotions, and they comprise two sub-orders, the IMMEDIATE, and the RETROSPECTIVE Emotions, according as they look to the present, or to the past.

7. The Immediate Emotions are—I. *Sympathy* and *Antipathy*, the one being an Emotion of pleasure, arising from the contemplation of some pleasure in another, or of pain, on the contemplation of pain,—while Antipathy is exactly the reverse. Antipathy, as an original Emotion, and not confined to individuals, may be considered as quite an exception, for Sympathy is the general law of human nature. When Antipathy results from previous hatred towards an individual, then it is no longer original.

8. II. *Pride* and *Humility*. Pride is a pleasing Emotion arising from the consciousness of some real or supposed excellence in ourselves, or connected with ourselves, as compared with others. Humility is a painful Emotion arising from the consciousness of some real or supposed defect in ourselves, or connected with ourselves, as compared with others.

9. The Retrospective Emotions are—I. *Regret*, a painful Emotion, arising from reflecting on a past action, or past omission, on our part, from

which loss or injury has resulted, but which we do not morally condemn. We may regret our want of foresight, or want of activity, but we do not feel *Remorse.*

10. II. *Remorse.* This is a compound state of mind, comprising—1. A judgment of condemnation on our own past conduct. 2. A most painful Emotion consequent thereon. The grief of Remorse is one *sui generis,* accompanied with Humility, but not so impregnated with it as the next and kindred Emotion, *Shame.*

11. III. *Shame.* "Shame and Remorse are the two great bulwarks of morality, and though allied, and often mixed one with another, yet they are by no means identical. Remorse never arises but from some action, which, on the retrospect appears to ourselves morally wrong, whereas Shame is often roused by acts morally indifferent, and sometimes, as in the case of false shame, positively praise-worthy. Even when the conduct which rouses Shame is of an immoral nature, the shame is often out of all proportion to the degree of guilt. A woman is more ashamed of a slight act of immodesty than of a crime. Shame originates in the consciousness, not, of necessity, that we have done wrong, but that we have done something that lays us open to ridicule and contempt. Now, as ridicule and contempt, the former especially, are often awarded where there is no moral delinquency, so Shame is frequently

felt where there is little to blame. Shame, then, is variable, because it depends chiefly on the sentiments of others, and in particular upon the sentiments of Ridicule and Contempt, which themselves are liable to change."* That the feeling in Shame is peculiar, is proved by the outward evidence of the *Blush*, which accompanies no other Emotion: but along with this feeling there is a strong mixture of Humility.

12. The second great class is that of the ACTIVE Emotions, which always comprise DESIRE or FEAR as one element at least, and these are the immediate antecedents of all those actions which are called voluntary. To them alone, and only when intense or permanent, the term *Passion* is properly applied.

13. Some of the Active Emotions look only to self; some to others, either in whole or in part; and consequently, they may be divided into the SOLITARY or SELF-REGARDING, and the SOCIAL Emotions.

14. ORDER FIRST. The Solitary or Self-regarding Emotions are the following:—

I. *Ambition*, or desire of power.

II. *Desire of Wealth*, with its varieties, *Covetousness* and *Avarice*.

III. *Desire of Reputation*, of Fame or Glory.

IV. *Curiosity*, or *Desire of Knowledge*.

* Ramsay's "Analysis and Theory of the Emotions," page 7.

V. *Desire of Life* or *Continued Existence*, here and hereafter.[b]

15. ORDER SECOND. The Social Emotions may be subdivided into the BENEVOLENT and the MALEVOLENT.

16. The Benevolent Emotions may all be included under two genera, LOVE and PITY.

17. Love, in whatever form, comprises at least two elements:—1. A certain pleasure derived from contemplating the beloved object: 2. A desire of good to that object. These elements are essential; for they are sufficient to constitute Love, and without them there can be no such Emotion.[c] Under this genus may be enumerated as species—

I. *General Benevolence*, or Love to mankind in general, which is the simplest species of Love, and distinguished from all other species by being *indiscriminate*.

II. *Friendship*, and every private attachment, whether transient or permanent, slight or serious, contain a third element in addition to the two above mentioned, namely, the desire of being loved in return.[d]

[b] For a particular account of all these desires, see the Author's "Inquiry into the Principles of Human Happiness and Duty," Book I, Part ii. Also his "Analysis and Theory of the Emotions."

[c] Ramsay's "Analysis and Theory of the Emotions," page 17.

[d] Ibid.

III. *Love*, properly so called, Love between the sexes, comprises a fourth element besides these three, which, from its strength, is sometimes peculiarly called *Desire*.

18. These three species are quite distinct; but the following are only varieties or modifications of the same. Thus, *Patriotism* is general Benevolence limited to our own countrymen; and *Family Affection* is a modification of Friendship taken in its widest sense, for whatever partiality we may entertain towards relatives, we certainly desire that it should be reciprocal. *Gratitude*, moreover, is love towards an individual on account of some benefit conferred intentionally, and modified by that consideration.

19. Besides the above, there are other Compound Emotions, of which Love forms a part. Such are the *Religious Emotions*, which comprise Gratitude to God, and if Gratitude, then Love, and along with this the Desire of Continued Existence. Such is *Admiration*, which seems to occupy the interval between pure Love and Esteem, comprising some Affection, as well as a favourable judgment concerning its object. But it is essentially distinguished from both by the presence of Wonder, which is a necessary part of Admiration, and owing to this element in particular, the compound state of mind is more allied to Emotion than to cool intellectual decision. In Esteem, on the other hand, the

Emotion of Love is reduced to the lowest degree compatible with partiality, while the judgment as to merit is serious and decided. *Respect*, again, is a mixture of Love with Humility, and Humility tempers Love with something approaching to Fear. Moreover, Respect seems to comprise a certain exercise of the judgment. In *Veneration*, the Humility is deeper, and consequently the Love is more tempered with Fear; while in *Awe* fear predominates." [e]

20. The second genus of the Benevolent Affections is PITY.

21. Pity, or Compassion, embraces two elements; first, a feeling of pain at the sufferings of another,—secondly, a desire to relieve those sufferings. This desire may be further analysed, for it seems compounded, 1. Of a desire of relief to the sympathetic pain which we feel, closely followed by 2. The desire of removing the occasion of that pain, viz., the sufferings of another.

22. Thus, the primary element in Pity is Painful Sympathy, which seems necessary to the rise of the other, Desire of relieving; while Love begins with Pleasing Sympathy, from which springs the Desire of giving pleasure. Sympathy, then,—a feeling for the weal or woe of others,—which is an ultimate fact in human nature, is the source of both Love and Pity.

[e] Ramsay's "Analysis and Theory of the Emotions," page 21.

23. As the Benevolent Emotions comprise Love and Pity, so do the Malevolent HATRED and MALICE.

24. Hatred, in whatever form, contains at least two elements; first, a certain pain on contemplating the object hated, secondly, a desire of evil to that object. These elements are essential. Under the genus HATE may be enumerated:—

I. *Anger.* All the species or varieties of Hate agree in this, that they are limited to certain individuals or classes of individuals, and that there is always some particular cause for the Hate. There is no such thing as General Hate, as there is General Love and Benevolence; for if Misanthropy exist, it is a rare exception,—a disease,—not a regular and healthy phenomenon of human nature. Thus, Anger is a sudden and violent emotion of Hatred towards an individual on account of some injury or affront, even though unintentional, and it is gratified only by retaliation; whereas, simple Hate is satisfied by evil that may befall its object from any source.

II. *Resentment* is Anger permanent and confirmed by reflection on the conduct of the offending party. If Anger seek retaliation, much more Resentment, which is not confirmed until we are convinced that the injury or affront was intentional, or the result of undue negligence.

III. In *Revenge,* the desire of retaliation becomes intense, and whatever calamities may

befall the offending party from other sources, retaliation alone fully gratifies. When the opportunity of Revenge is delayed, this may become a very permanent as well as a very violent passion, and the attainment of its object would seem to be attended with an intense pleasure, scarcely, if at all, inferior to any of which our nature is susceptible. This passion is strongly pourtrayed in the characters of Shylock, Iago, and Zanga.

IV. *Indignation.* Resentment and Indignation are both species of anger, and differ from one another in this respect, that the former depends entirely upon private injury or affront, and may arise even when the offender is not morally to blame; whereas, the latter may be roused by an injury to others as well as to ourselves, and always supposes some moral fault in the provoking party. As the injuries which are the source of Resentment are felt by us directly, so those which are the source of Indignation are, in many cases, felt by Sympathy indirectly, and in these cases Indignation rarely becomes excessive. This, then, is a moral Emotion, and when united with an intellectual decision or judgment, constitutes the moral sentiment of Disapprobation. Resentment, on the contrary, being roused by personal injury, is sometimes unjust, more frequently excessive, and, at least, never fails to give additional energy to moral Indignation.

V. *Jealousy,* whatever be its object, comprises

two proximate elements, 1. A fear of being deprived by another of what we consider our right. 2. A feeling of hate towards the author of the injury. The Emotion of Hate has already been analysed. Thus, FEAR and HATE are the essential elements of Jealousy, and the former precedes and gives birth to the latter, or, in other words, it is the Self-regarding passion which rouses the Malevolent.

6. *Envy.* The passion of Envy comprehends also two elements, 1. Grief at the superiority of another. 2. A feeling of Hate towards the possessor of such superiority. Thus a Passive Emotion of pain, and an Active Emotion of Hate, are the constituent elements of Envy, and the former rouses the latter. We may remark this difference between the Malevolent desire which belongs to Anger and Resentment, etc., and the one included under Envy and Jealousy, that the former is a Primary or Original Desire, the latter, Secondary, or derived. When we receive an injury, Anger immediately follows, and the passion vents itself without any notion that the injury can thereby be repaired. The Malevolent feeling, in this case, therefore, is original, not dependent on calculation, nor subservient to any other design. But, in Envy, the Grief felt cannot be looked upon as an injury for which any one is to blame, otherwise, Resentment, not Envy, would be roused;

and, consequently, Hatred is here not stirred up immediately. A painful sense of Inferiority is felt, followed by the desire of relieving this uneasiness; then the mind turns to the innocent cause of the same, wishes to pull it down in order to raise Self, and finally comes to hate it as the obstacle to Self-complacency. In this case, then, the Malevolent Emotion is the consequence of a Self-regarding Desire. The same holds true of Jealousy, as we have already seen under that head. Agreeably to this distinction, the Angry Passions, including Simple Anger, Resentment, Revenge, Indignation, might be classed together as a sub-genus of Hate; and the Jealous Passions, namely, Jealousy and Envy, as another sub-genus.

7. Lastly: *Contempt* is a mixture of Pride with Hatred or Dislike; and is directly opposed to *Respect*, which unites Humility with Love.

25. MALICE seems to bear the same relation to Hatred which Pity does to Love. As Pity is composed of two elements, a painful Sympathy with the sufferings of another, who may be no friend, and a desire to relieve those sufferings; so Malice is compounded of a pleasurable feeling arising from the pain of another, who is no enemy, and of a desire to inflict such pain. The one unites a painful Sympathy with desire of relief, the other pleasurable Antipathy with desire of its continuance. This desire also, as

in the case of Pity, probably admits of a further Analysis; for it seems to be compounded of, 1. A desire of the continuance of that pleasure of Antipathy which we experience, and, 2. A desire of the continuance of the occasion of that pleasure, viz., the pain of another, And, as in Pity, the primary element is a pain of Sympathy, so, in Malice, the original element is a pleasure of Antipathy, which seems necessary to produce the desire which follows. Be it observed that Malice is rather an exception to the general law of human nature; for where there is no particular reason to the contrary, Sympathy, not Antipathy, Good-will, not Ill-will, is the rule. But Malice supposes no cause of Hatred,—it is not limited to any one, but applies indifferently to all. Still, Malice is not Misanthropy; for the primary element in the one is Pleasure, in the other, Pain. Besides, the latter, if it exist, is a permanent feeling; the former, but an occasional emotion; and whereas Malice supposes no previous injustice, Misanthropy arises from some injury, or series of injuries, inflicted on an individual, who, by association, comes to hate not only those who injured him, but even the whole human race.

26. The Emotions are often united with Intellectual states of mind. Thus, when Desire is combined with Belief, we have Hope, Expectation, Confidence, in all which the essential

elements are the same, varying only in degree; for, in all, Desire is united with Belief, an emotion with an intellectual state or Thought; and, in all, the probability of attainment modifies the intensity of the Desire. Certainty, whether of success or failure, in other words, Security or Despair, both destroy desire, which depends upon uncertainty; and, therefore, towards either limit the desire will decline; while the degree of probability most favourable to ardour will be found between the two extremes, and at some distance from both.

Corollary. Were our knowledge of a future state more extensive, our belief in it complete, we should desire it less. So it is with Human Love, which feeds upon Uncertainty, first of all upon doubts of reciprocity, afterwards on uncertainty arising from other obstacles.

27. Again, in *Moral Sentiment*, that complex and most important mental phenomenon, Emotion is combined with an Intellectual state. The former is a species of Love or of Hate, mingled with Wonder, the latter consists in a Judgment as to the nature or tendency of actions and characters; and the whole constitutes a Moral Sentiment of Approbation or of Disapprobation.[a]

28. In general, the term *Sentiment* properly means a compound state of mind, wherein Emo-

[a] See the Author's "Principles of Human Happiness and Duty." Book II. Part i.

tion is combined with a Judgment or Intellectual decision. It is a valuable word, when so used, and not employed, as it often is, to signify mere opinion,[b] or mere feeling.

SECTION THIRD.

ON THE ORIGIN OF DESIRE.

1. The first and most important division of the Desires is that into the Solitary or Self-regarding, and the Social Desires; of which the former look only to the good of Self, the latter to the good or evil of others. This distinction may well be called important, inasmuch as it decides in the negative the question as to the utter Selfishness of man. We must therefore dwell a little upon this point.

2. Sympathy with the weal or woe of others is surely an indisputable fact in human nature, and, as we conceive, an *ultimate* fact, not to be accounted for by any other principle, in particular, not to be explained by a reference to *Self*. For, we sympathize with total strangers, with those far away, or long dead, who can have

[b] Even Reid thus abuses the word when he talks of the *Sentiments* of philosophers, of Locke, Hume, Berkeley, etc. See his "Essays on the Intellectual Powers." Essay II. Chap. vii. viii. ix. x. xi. xii.

no influence whatsoever on our fortunes. Nay, we sympathize even with fictitious personages. Besides, this feeling is often instantaneous, as in Pity, and therefore cannot arise, as Hobbes says, "from the imagination that the like calamity may befall himself." And even if it did, what then? On that supposition, no doubt, Sympathy would be no longer an *Ultimate* fact, for it would be accounted for by a selfish reflection; but the fact could not be explained away,—it could not be denied that we do sympathize with others, in numberless cases, where our own interests are not *immediately* concerned; and therefore, even on this supposition, the pleasures and pains of Sympathy would be different from all others, and we may add, more amiable, by reason of the more remote reference to Self.

3. "Again, it cannot be denied that we often desire the good of others, and sometimes their evil, and that too in cases where the good or evil of others seems productive of no benefit to ourselves. No doubt, it may be maintained that, in desiring the welfare of others, we really look to our own gratification, and that the pleasure anticipated from Sympathy creates the motive to charitable deeds. But were this theory true, for this also is a theory, it would not disprove the reality of our Benevolent Desires,—it would only account for their origin, supposing them to exist. In every view of the case, then, the pleasures and

pains of Sympathy, which reach us as it were by a rebound, because pleasure or pain has been first felt by another, must be distinguished from the pleasures and pains which affect us directly; and the desires which look immediately to the welfare of our fellow-creatures, which becomes our own only by Sympathy, must be separated from the Desires which urge us to our own gratification without regard to that of others."*

4. The reality of the Social Desires, as distinct from the Solitary or Self-regarding, being established, we may now inquire how the former originate. Do they really arise from the prospect of some gratification to Self, however refined, or do they not?

5. Take the case of Anger. When a choleric man receives a blow, does he in general take time to consider what benefit or what injury may result to himself from returning it? If he do, we may be sure that Anger is not uppermost in his soul. He may certainly restrain his Anger from Prudence, from Fear, from Respect, for it is not pretended that Anger is ungovernable; but supposing it indulged in, what does it imply? When a blow is received, the first impulse is to return it, and if the impulse be not checked, the injury is returned forthwith. To the feeling of injury, to the perception of an individual as the cause of the injury, there succeeds immediately a violent

* "Analysis and Theory of the Emotions." Part II.

emotion of Hatred towards that individual, comprising pain at his presence, and desire of evil towards him. Between the perception of the being who has injured us, and the subsequent emotion of Hatred, it does not seem possible, to detect any intervening feeling, or thought, much less any calculation of consequences, or balancing of opposite advantages. The emotion and its effects are too sudden to admit of such an hypothesis. Accordingly, the indulgence of Anger is often quite at variance with our interests, it is impolitic; and, therefore, the object of the prudent and the crafty man is to keep it down. It seems, then, vain to deny that the Malevolent desire contained in Anger looks really to the evil of another, not to the good of Self. The desire is roused, as experience proves, not by the prospect of some personal pleasure to come, but by some pain actually felt. There is surely no reason, prior to experience, why hurt to one who has injured us may not be an ultimate object of Desire, as well as pleasure to Self. The latter may be a more general object, but must it be the only one? And where there is no convincing *a priori* argument, experience should decide.

6. What has been said of Anger, applies equally to Love and Gratitude. Love, at first sight, is no fiction of the poets, but a reality; it may arise where no favours have been received, and none expected; where there has been no

time for calculations of interest, none even for anticipating the pleasures of Sympathy. The delight felt at the sight of the object seems to be followed instantaneously by Good-will towards it. So in the case of Gratitude. In many instances, Love towards our Benefactor rises instantly, far too suddenly to admit of any calculation as to the advantages likely to result to ourselves from returning his kindness, and even too rapidly to allow of the pleasures of Sympathy being presented to the mind in prospect, as an object of Desire. As far as our experience tells us, and we can go no farther, the Love, the Good-will, immediately follows the feeling of a benefit, and the thought of a benefactor; nor are we sensible of any intervening sequence of phenomena. Thus, as, in the case of anger, ill-will follows instantly the pain of an injury; so, in gratitude, good-will immediately succeeds to the pleasure of the benefit. And if we have already allowed that the evil of another may be an ultimate object of Desire, we shall admit the more easily that the good of another may be so likewise. Thus, it appears that, in simple Love, as well as in Gratitude, it is the pleasure which we actually feel, not a vague pleasure in prospect, that rouses the Emotion of Desire, the object of which is, not the good of Self, of whatsoever kind, but that of another.

7. So far as to the origin of the *Social*

Desires, Benevolent, as well as Malevolent. Let us now consider the *Solitary* or *Self-regarding*.

8. With respect to these, as well as to the foregoing, there are two questions, the one relating to the *nature* of the Self-regarding Desires, the other to their *origin*. First, are all these reducible to Desire of Pleasure, of some sort, or Self-gratification,—in other words, are they all varieties of one principle, Self-love; or, on the contrary, do they comprise Desires such as Ambition, Covetousness, Curiosity, which may be distinguished from Self-love?[b]

9. A distinction may, no doubt, be got up between Self-love, and the Self-regarding Desires or Passions; but then it is by changing the usual meaning of the word. This is exactly what Bishop Butler has done, by limiting the signification of Self-love to a calm calculating view of our interests, that is, to Desire guided by reason. But the Desire does not change its nature because it is so guided,—it remains the same, only under control. There appears, therefore, no good ground for this distinction.

10. It may be that all the Self-regarding Desires look not to mere pleasure, but what of that? If they look to Power, simply as such

[b] The latter is the opinion of Bishop Butler, in his famous Sermons at the Rolls, and it has been adopted by Dr. Thomas Brown, in his Lectures on the Philosophy of the Human Mind. Vol. III., Lect. lxv. lxvi.

without any ulterior object, or to Wealth, or to Knowledge, or to Continued Existenee, it is still *our own* Power, *our own* Wealth, *our own* Knowledge, *our own* Life, which we desire to increase or prolong. Why then attempt a distinction between them, as if one were more or less selfish than another? Certainly, common sense makes no such distinction, and in such matters, common sense is of great weight.

11. We cannot, therefore, adopt the distinction of Bishop Butler. At the same time, we allow that a man may desire Power, Riches, or Knowledge, for their own sakes, even without thinking of the Pleasure which accompanies them; but we believe that this is the result of association, constant association with notions of Pleasure. Riches, in particular, are sought at first as the means of enjoyment, afterwards, by the miser, for their own sake. So it is with the rest.

12. It is allowed that Pleasure is one great source of Desire, that the attainment of every Desire is attended with Pleasure, and that this Pleasure re-acts upon the Desire, and increases it. There is surely, then, a probability that Pleasure is *originally* the sole cause of Self-regarding Desire.

13. This probability will be strengthened by considering what we call a *want*. It is notorious that men desire nothing ardently until they have

felt a *want* of it. Now a want comprehends two elements, a passive feeling of pain, (bodily or mental, according to common language) and a Desire of relief to that pain. So it is with Hunger, and Thirst, which are properly *Appetites*, because, here the pain is a Sensation, immediately depending on a change in the state of the body. Other innumerable wants we have where the pain is not a Sensation.

14. Desire of relief from Pain is a Desire of Negative Pleasure. This, then, must be our first Desire, if, as we have seen reason to believe, Hunger and Thirst are the first of our feelings which comprise Emotion.

15. Moreover, all experience seems to prove that our other Desires begin with Wants. The pain of Ignorance first rouses Curiosity, the pain of Inferiority, Ambition, and Love of Glory; the prospect of Indigence, Desire of Riches; wearisome Repetition, a wish for Variety; while the pain of *ennui* creates activity of every sort. Pain, in short, seems to be the *primum mobile* of the human race.

16. Let a man be perfectly at ease in body, and in mind, and what can he desire? *Corollary:* Perfect happiness in this life, or merely the absence of all pain, is inconsistent with Religion; for it would stifle the desire of a life to come.

17. Pain, then, actually felt, is the Origin or Cause of Desire; and its first form is desire of

relief from uneasiness. But desire of relief from uneasiness is only a modification of desire of Pleasure; and, therefore, the conclusion is, that, while Pain actually felt is the *Source* of Desire, Pleasure is its *primary* object. It is allowed that, *subsequently*, other objects may be sought for their own sakes, without direct reference to Pleasure; but had they not been intimately associated with Pleasure, they never would have been desired.

18. To sum up all. When treating of the Social Desires, we found that those desires are real, and distinct from the Self-regarding; that their direct object is the good or evil of others, not the good of Self; and that they spring from Passive Emotions of Pleasure, or of Pain, roused by our fellows. Now we find that the Primary Object of the Self-regarding Desires is Pleasure; while they originate in Pain. Therefore, Desire, in general, springs from the actual feeling of Pleasure or of Pain; the Benevolent affections taking their origin from the former, the Malevolent, as well as the Self-regarding, from the latter.

19. "If then you wish for the Love of others, try to confer Pleasure; and beware of giving Pain, if you would not be an object of Hate." [c]

20. Does it not also follow that Pain, bodily as well as mental, tends to render men Selfish or Malevolent? It does; yet *some* private pain, *some*

[c] "Analysis and Theory of the Emotions."

the latter counteracts the former, producing its usual effect, a feeling of Benevolence.

23. Remains the case of Malice. In simple Malice, the pain of another gives pleasure, without any previous hatred; and desiring the continuance of the pleasure, we must wish for the continuance of the pain. Here, pleasure derived from another produces, not benevolence, but malevolence, because the pain of another is indispensable to our own gratification, which depends upon that pain, and upon nothing else. This, then, *is* a real exception to the Law above stated, because, happily, the tendency to feel pleasure, not pain, at the ills of others, is itself an exception, an anomaly in human nature.

24. That pain is the *primum mobile* of the human race, first in the order of time, as well as in importance, is a great truth pregnant with inferences. It has often been remarked that men of genius are liable to mental pains to which ordinary men are strangers; but it has not been so frequently noticed that those very pains develope genius. Intolerance of life without activity, of mere existence without distinction, a painful sense of insignificance, an inward burning under Contempt and obloquy, mental maladies in every form, urge the man who has powers to exert them to the utmost. The keen annoyance produced by an ill-natured Review first drew out the talents of Lord Byron. The easy, good-

suffering, is essential to Sympathy, and to Pity. Does Pleasure, then, make men Benevolent? Only when it proceeds from another. Love begets Love,—not merely to one, but to all.

21. There are two apparent exceptions to the above Law, in the cases of Pity and Malice, for, in these, Pain and Pleasure seem to create good and ill-will respectively. We feel the sufferings of our brother, and desire to relieve them; we are gratified at another's vexation, and wish to plague him. How shall we account for this anomaly?

22. When the sufferings of another give us unmixed pain, they do not create Pity. The proud man is humiliated at the calamities of his relations, and in consequence feels Dislike towards them, while towards others he entertains only Contempt; the over sensitive is shocked at distress, and flies from it with Disgust or horror; while the righteous looks with Indignation, rather than Pity, on merited misfortune. But when with the Sympathetic pain is combined a pleasing Self-complacency arising from contrast of position, as well as from the consciousness of our susceptibility to so amiable an emotion as Sympathy, then arises Pity, the wish to relieve distress. Thus pity springs from a mixture of pain and pleasure, and the pain is even necessary to the pleasure; but where there is no pleasure there is no Pity. This then is no real exception. There are two Causes at work, Pain and Pleasure, and

tempered, phlegmatic man, knows little of such pains, and, therefore, he never rises to eminence. Pain is the source of superiority,—the price that is paid for it.

SECTION FOURTH.

OF THE WILL.

1. We now approach one of the most knotty points in Metaphysics, involving the Liberty, or the Necessity, of the Will.

2. To the solution of all intricate questions, a right comprehension of the meaning of terms, and an accurate statement of the Question, are indispensable; sometimes nothing more is required. Here, then, these must not be neglected.

3. First, then, what is meant by the WILL; or, when are we said to *Will* anything?

4. It is perfectly clear that Will and Desire are intimately related; and yet they are not the same. *Volition*, which is an act of that Faculty which we call WILL, always comprehends an emotion of *Desire;* but every Desire is not a Volition; consequently, Volition means Desire, and something more.

5. So far well: but what is that more? We *desire* many things, some only for a moment, others for a longer time, till the desire ceases; or

is driven out by a contrary; nay, we Desire things which we know to be unattainable; but we never *Will* when we know that we cannot perform. Will, then, certainly implies *Belief* that the object of Desire is in our power.

6. Still, I may strongly desire to master a difficult work, say the *Principia* of Newton; nay, I may believe that I shall master it, but can I affirm that I will? So, though I may earnestly wish to conquer a certain habit of thought, and I may even believe that I shall, yet I cannot say that I will succeed. Why not? Because no one can have a perfect belief, free from all doubt, that his Thoughts will be obedient to his Desires. We know that Thoughts are rebellious above all things; they are certainly greatly influenced by Desire, but they obey it not implicitly, and cannot be Willed.

7. And if Thought be not directly subject to Desire, neither are Emotions, nor Sensations. No one can pretend to call up an Emotion or a Sensation directly, and at pleasure. Therefore, none of these Mental States are subject to the Will. Indirectly we can do much; but we must first Will something for the purpose, and, after all, the end may fail.

8. What then can we Will? What can we Desire without a doubt of succeeding? Action, bodily action, and nothing else. Here alone there is *Volition*, because here alone Desire is despotic.

9. Finally, to constitute an act of the Will, or Volition, it is necessary that an outward action be performed; for, were a man's arm suddenly to become paralysed, he might make a mental effort to move it, but he could not be said to Will what was never done.

10. Therefore, to sum up all, *Volition is Desire, combined with undoubting Belief that the object is in our power, and terminating in an outward action.*

11. Having fixed the meaning of the term *Will,* we have next to enquire in what sense Liberty, or Necessity, can be applied to it.

12. In common language the term Liberty is more frequently opposed to Slavery than to Necessity; and it may be useful to our present purpose, first to determine the former meaning of the word.

13. When Liberty is opposed to Slavery, it evidently implies the absence of Restraint or Hindrance to action; so that what we have to determine is the nature of this Restraint or Hindrance.

14. Not every restraint, not every hindrance, is opposed to Liberty; for no one would say that his Liberty was infringed, because he could not walk ten miles an hour. He would say that he was free, but he had not the *Power.* Neither would he say that he was not at Liberty to master the Principia of Newton, but he was *unable.* Therefore the mere want of bodily or mental

power in the individual is not opposed to Liberty.

15. Neither is every hindrance from without at variance with Liberty; for if a man came to a mountain which he could not cross, or were he kept from leaving his house by a flood of waters, he would not really think himself less free; though, speaking metaphorically, he might call himself a prisoner. His Power alone, as in the former case, would be interfered with, not his Liberty.

16. Now suppose that he be kept at home by fear of a raging lion roaming round his dwelling, is he then less free? Certainly not, in the proper use of language. He is restrained by his fears; but the fear of a beast is not Slavery.

17. What if he be restrained from any action, from any sin, by the fear of God, or of some superior Spirit? Would this be an attack upon Liberty? By no means. The man is still free to do as he pleases. All men think themselves so.

18. But lastly, let a man be hindered from doing anything he may wish, either by a physical obstacle set up *on purpose* to restrain him by his fellow-men, as bolts and bars, or by fear of some harm from them; then he is no longer free.

19. Thus it appears that Liberty, when opposed to Slavery, is curbed by the resisting Wills of our fellow-men, and by nothing else. Man alone can abridge the Liberty of man; and this abridgement consists either in a positive impedi-

ment, set up on purpose, as prison walls and fetters, or in the dread of some penalty.

20. Liberty, in the above sense, as opposed to Slavery, is applied only to action; and a man is a free agent in so far as he is unrestrained by the Wills of his fellows. But, in every society, civilized or savage, man experiences some opposition from other men, even the most despotic monarch, and, therefore, no where but in perfect solitude can there be perfect Liberty. And the most abject slave, even the negro of Carolina, has freedom in some of his actions. Consequently, the question of Liberty in this sense is one of degree; and we cannot say *absolutely* that man is either free or enslaved; though the difference between an Englishman and a black slave be immense.

21. When, however, Liberty is applied to the Will, then it is opposed not to Slavery, but to Necessity. What, then, is meant by Liberty in this sense,—what by Necessity? and where is the analogy between the two meanings of the former word?

22. We have said that when Liberty is opposed to Slavery, liberty of action is always understood, and this consists in the absence of restraint upon our actions from the wills of our fellow-men.

23. But what is an action? Action here must mean voluntary action, or it means nothing;

for this alone can be enslaved; and it consists of two parts, the Will or Mental State, which is the Cause, and the outward movement, the Effect. Now, as an Effect can be either produced or prevented only by operating on the Cause, therefore, it is really the Will which is restrained, wherever Liberty is abridged. Consequently, in the popular, as well as in the philosophical sense of the word, Liberty refers to the Will, and as the absence of restraint, of one sort, is thereby supposed in the former case, so, we may presume, restraint of another sort is implied in the latter. For the common use of language is a guide, which may indeed lead us astray, but still it is a guide. Men seldom call things by the same name which have no points of resemblance. Liberty, then, when opposed to Necessity, implies restraint upon the Will, as well as when opposed to Slavery. Consequently, the difference must lie in the kind of restraint.

24. We believe that the Course of Nature, at least of Material Nature, is dependant upon fixed Causes, causes which under the same circumstance always produce the same Effects; though, of course, it would be the height of presumption to deny that the Being who arranged the whole may alter the same at His pleasure. Still it is matter of experience that the course of material nature is uniform, and we act with confidence accordingly. We can thus predict with certainty,

long before, Physical Phenomena, such as the rise of tides, the eclipses of Sun and Moon, and the events always come to pass just as we foretold. We, therefore, cannot believe that there exists in the Physical universe any power of *originating* change, of *beginning* motion; in other words, the course of Physical Nature is *Necessary*.

25. By Necessity, then, we mean a fixed unalterable (except by Omnipotence) concatenation of Cause and Effect, wherein no change *originates*, every change depending entirely on something that went before. Now the question is, is the Will, and consequently are the voluntary acts of man, included in this necessary Course of Nature, or are they not? On the latter supposition, the Will is said to be *free*, free from the restraint of an immutable Law, and consequently endowed with a power of *originating* change. That is the kind of restraint which necessity supposes.

26. Between Voluntary Motion, and every other motion in the universe, the separation is wide, deep, unfathomable, impassable, — for in pure physical motion the cause, or Indispensable Antecedent, is always some other motion, — whereas, in Voluntary movement, the Antecedent is mental, a Volition. Here, then, we have an instance of the *Origin* of motion. Can we then escape the inference that the First Cause of all motion is spiritual?

27. This argument for a spiritual first cause

is quite independent of that derived from the manifold instances of design in the universe. Both come to the same conclusion, but from different premises. Design unquestionably argues a designer, and a designer must be intellectual, and therefore spiritual. Again, we know but of one case of the origin of motion, and in that case the cause is spiritual; hence the probability that the first cause of all motion is spiritual. These are the two grand arguments against Materialism and Atheism; two powers which have often been crushed, and apparently annihilated; but ever and anon they rise again out of the dirt, to scare and sadden the world. Sometimes they stalk abroad in great pomp, arrayed in the garb of poetry by a Lucretius, sometimes they lurk more modestly under the mask of *gradual developments*, or the cloak of *positive* Philosophy.

28. Man, being endowed with the power of originating motion, partakes, in so far, of the Attributes of Deity. He becomes, as it were, a creator, a creator of motion, and thus, within his comparatively limited sphere, he has great influence, either for good or for ill. Now, the God whom we acknowledge, is not, like the Gods of antiquity, subjected to a dark mysterious power called FATE; but he is a self-existent, self-dependant, self-originating being, free to act or not to act. If, then, man be so far like to God, that he has a power of originating motion, is it

not probable that this power bears a resemblance to that of God who gave it? that, being once communicated, some Liberty was given along with it to complete the delegated authority? Had the will of man been tied down by inexorable laws, like material nature, would not the gift have been illusory? Instead of being a copy, on an infinitely small scale, but still a copy, of the Divine Will, would it not have been quite different? If God created man in his own image, that resemblance must be supposed to extend to his Will, without which the resemblance could be of no importance. In short, once allow that there is a God, a Spiritual and a free Being, and that Fate is nonsense as applied to him; then we may presume that man, so far as spiritual, is also free from fate.

29. This beginning of motion by the Will is a grand and instructive fact, for it at once does away with the argument derived from the necessary chain of Cause and Effect, supposed to prevail in the world of matter. A case wherein motion *begins* can have no analogy to any other, where motion is the effect of some previous motion. There is, then, no improbability, prior to actual experience, in the lines of the poet—

> "And binding nature fast in fate,
> Left free the human Will."

as there would have been but for the marked difference between the origin and the continuation of motion, and, I may add, the utter unlikeness in almost every respect between Mind and Matter. Matter is subject to the law of *vis inertiæ*, *i. e.*, it has a tendency to remain for ever in the same state, whether of rest or motion; but Mind is perpetually changing, so that no one can predict what his own state of mind may be half-an-hour hence. It is clear, then, that all analogies drawn from Matter to Mind are fallacious. They may do for Poetry, but they are inadmissable in Philosophy.

30. Having thus disposed of what may be called the *a priori* argument in favour of Necessity, derived from Necessity in matter; and having shewn further, that the acknowledged resemblance between God and Man in the power of originating motion, renders it probable that this resemblance comprehends the liberty of willing, we may next consider what we learn on the subject from direct experience.

31. That the human mind is in some degree subject to causes, known and admitting of calculation, is a truth acknowledged by the universal sense of mankind. All law, all morality, all society, rest upon this supposition. There is no law, political or moral, without a sanction, that is, without reward or punishment,—and, if reward and punishment produce no effect, they are empty

names. But, that they do produce some Effect, all men allow, though, as to the degree of Effect, we may differ in opinion. And how can they act but upon the Wills of men, and if they do so act, then the Will is subject to causes known and appreciable. The sanction of political law is generally some punishment, in the shape of restraint upon liberty, or bodily pain, or even loss of life, or else some curtailment of our estate; while moral laws are guarded by more spiritual arms, by praise and blame, moral approbation and disapprobation. These, no less than the terrors of political law, are universally supposed to have an Effect, more or less, in the way of encouraging some actions, and discouraging others; and be the Effect what it may, it can be produced only through the Will.

32. So far, then, we know that men are universally agreed. Wherever men exist there is some moral law, wherever society is established there is some political law, and every where they are supposed to tend towards an useful effect, to have a beneficient influence on the minds, and ultimately on the Wills and Actions of mankind. This universal belief we cannot suppose unfounded, without violating a fundamental article of faith, that whatever is universally believed has some foundation in truth. Men in all ages, and in all countries, cannot have believed a lie, at least where the subject was one open to common ob-

servation; and what is more present to us than the Wills and Actions of ourselves and our fellows?

33. On this sure foundation, Hume, Hobbes, and others, have attempted to raise the fabric of Necessity, but the basis was too-narrow for the super-structure. For, if it be true that the Will of man is to some extent subject to known Causes, it is also a fact that the operation of these Causes is very variable and uncertain, widely different from the steady invariable march of physical agencies. No Moral or Political Laws produce all the effect intended. They certainly do check crime and misdemeanour, but very imperfectly, as all experience proves. With all our efforts, with all our improvements in Morals and Politics, there still remains a wide range of action which no Law can reach. Our experience, then, of the operation of human Laws does not disprove the doctrine of Liberty, it shows only that Liberty has limits; that regulated Liberty, in short, not Licence or mere Caprice, is the Law of Human Nature and the Law of God.

34. If, on the one hand, the words and actions of all men, in all ages, prove that they consider the human Will to be in some degree subject to the influence of known Causes; on the other, they are no less agreed as to the fact, that these causes cannot be surely relied upon, and that there exists in man a power which can set at naught the deepest calculations. This power, the power

of willing, is then universally allowed, in a degree, to originate within the individual, and not to be traced to any outward source; and if we rely upon the universal belief of mankind in one case, so must we in another. At first sight, the two opinions may seem contradictory; but they are not so; for the opinion in neither case is absolute. All men believe that the Will may be influenced by known causes in some degree; and again, all believe that it can resist that influence and act *proprio motu*, and here there is no contradiction. The evidence of both these facts rests partly upon the Consciousness of what passes within ourselves, from which there is no appeal, partly on our experience of the actions of others; and both go to establish the same conclusion—the Liberty, but not the unlimited Liberty, of man.

35. In the following passage, the whole question is taken for granted, and decided at once against Liberty. "I conceive that nothing taketh beginning from itself, but from the action of some other immediate agent without itself. And that, therefore, when first a man hath an *appetite* or Will to something to which immediately before he had no appetite nor will, the *cause* of his will is not the will itself, but something else not in his own disposing. So that, whereas, it is out of controversy, that of voluntary actions the Will is the necessary cause, and by this which is said the *Will* is also *caused* by other things,

whereof it disposeth not, it followeth that voluntary actions have all of them necessary causes, and, therefore, are necessitated." [a]

36. Here it is evident that in starting with the assumption that "nothing taketh beginning from itself, but from the action of some other immediate agent without itself," the whole question is taken for granted. For such exactly is the point in debate. To this assumption we may object, and say, how do you know that?

37. It is here assumed as an unquestionable truth, that whatever begins to exist must have had a Cause of its existence, without itself. But those who believe in a Deity must allow that one Being at least exists without such a cause, from all Eternity, and if we allow such a Being, however incomprehensible, as more reasonable than a perpetual succession of Causes from all Eternity, why may we not allow that something may *begin* to exist without an outward Cause, provided such a supposition be agreeable to the evidence of Consciousness? Is the fact of something *beginning* to exist without an outward Cause more incomprehensible than a Being existing without an outward Cause *from all Eternity*?

38. Our experience of the course of Physical Nature certainly leads us to suppose that every material change had a cause without itself; and

[a] Hobbes' Tripos: of Liberty and Necessity.

a good deal of our experience of men leads us to the same conclusion; but our experience is necessarily limited, and, even within that experience, there are, we maintain, great *apparent* exceptions, to say the least.

39. But be our experience what it may, it never can lead to an infallible conclusion, to a conclusion universal and free from all possibility of error. We can never rely upon it, as we can upon the self-evident axioms and the demonstrations of Geometry. That two straight lines can never enclose a space, that the two angles at the base of an isosceles triangle are equal, we cannot doubt, when once we have considered the axiom, or taken in the proof of the latter proposition. Experience, Custom, Association, here go for nothing; all is the work of pure Intellect. But our Belief in an unbroken chain of Causes and Effects, *at first* instinctive and unaccountable, is *afterwards* only fortified by Experience, Custom, Association; and neither first nor last can we see that such a chain is necessary. We therefore cannot dogmatically assert that the Law has no exception. And if the believers in Deity must allow of one exception, for with Him the chain begins, they have no reason positively to disbelieve any other; provided a good case be made out. And such a case we conceive to be afforded by the *Will* of him who was made in the image of Deity.

40. From the above passage of Hobbes we

see that the doctrine of Man's Necessity is deduced from that of a perpetual succession of Causes and Effects distinct from each other, without end, without beginning,—a system which embraces no First Cause, no Deity. Thus Man's Necessity follows from Atheism. The conclusion is worthy of the premises; and so we leave it.[b]

41. A Philosopher of a very different stamp from the one above quoted, a religious Philosopher of the present day, has well said that "The Idea of a Cause is not derived from Experience, but has its origin in the mind itself;"[c] for the Idea of a Cause arises in the infant mind after a single instance of succession. The child who has burned his finger in the candle will avoid it ever after. The great error of the untutored mind is the seeing of Cause and Effect every where, an error

[b] The doctrine of Atheism involves Man's Necessity; but the doctrine of Man's Necessity does not involve Atheism; for many necessitarians have been Theists. These admit One First Cause, free and uncontrolled, but they deny any other. Do they not perceive that the admission of One Free agent is an argument for the existence of other similar agents? The system which combines Necessity with Atheism is at least more consistent than that which unites Necessity with Theism. The one is an uniform web, the other but a piece of patchwork.

[c] Whewell's "Philosophy of the Inductive Sciences." Book III. chap. ii.

which experience alone can correct. But when the same philosopher goes on to maintain, that the axiom "Every Event must have a Cause" is a necessary one, that "the Relation of Cause and Effect is of the same kind as the necessary relations of figure and number," he certainly runs from one error into another. And both we conceive to be dangerous. He who maintains with Hume that our Idea of Cause and Effect is derived from Experience or Custom, as he calls it, and that prior to Experience anything may be the Cause of anything, asserts a doctrine which, in its application merely to physical changes, considered as isolated phenomena, is no doubt free from danger. But when it is thence inferred that, for aught we know, senseless matter may have arranged itself into the beautiful and beneficent order manifest in the material world, or, still more, that it may have produced an intelligent soul, the mind instinctively revolts against such an opinion, and loudly proclaims it false. Scared from one extreme, we not unnaturally run into another; but there again danger meets us. In maintaining with Dr. Whewell that the axiom "every Event must have a Cause" is a necessary one, we support the doctrine of a perpetual circuit of Causes and Effects, without end, without beginning, and thus we get rid of a Great First Cause. That such was far, very far from the intention of this distinguished author, we well

know; but nevertheless the conclusion is a legitimate inference from the premises.[d]

42. The axiom, that "Every event must have a Cause" is not necessary, for it is not self-evident, and not universal, if we believe in God. Neither is the axiom derived from Experience, for we believe it long before experience could have taught it. It is, then, one of those fundamental Articles of Belief, truly instinctive, for they arise in the mind on the first occasion, but not self-evident, and, therefore not necessary, and possibly not universal.

43. It may, indeed, be said that by the word "event" is meant some change which had a beginning, and that, as God had no beginning, he is no exception to the Law. But if you allow that a Being may exist without an outward cause of his existence, can you dogmatically deny that any thing can *begin* to exist without an outward cause? Can you show that one of these suppositions is possible, the other not? and it is only for possibility that we are at present contending. You must either admit both, or neither; that is, you must either admit the possibility of God's existence and of Man's Liberty, or you must reject both, and fall back upon Atheism and Necessity.

[d] Thus we see that the axiom that prior to Experience any thing may be the Cause of any thing, though true of material changes, separately considered, leads to absurdity and Atheism when applied to organized matter, and to the intellectual world. See on this subject Cudworth's "Intellectual System," Chap. iii.

44. The argument by which Hume attempts to shake our belief in a Deity altogether, having previously reduced His Power and importance as much as possible, is derived entirely from the axiom that, in matters of fact at least, the Intellect is so dependant on Experience, that it cannot advance one step beyond. "It is only when two *species* of objects are found to be constantly conjoined, that we can infer the one from the other; and were an Effect produced which was entirely singular, and could not be comprehended under any known *species*, I do not see that we could form any conjecture or inference at all concerning its Cause. If experience, and observation, and analogy be, indeed, the only guides which we can reasonably follow in inferences of this nature; both the Effect and Cause must bear a similarity and resemblance to other Effects and Causes which we know, and which we have found in many instances to be conjoined with each other. I leave to your own reflection to pursue the consequences of this principle. I shall just observe that, as the antagonists of *Epicurus* always suppose the universe, an Effect quite singular and unparalleled, to be the proof of a Deity, a Cause no less singular and unparalleled, your reasonings, upon that supposition, seem, at least, to merit our attention." [e]

[e] Essays, Vol. II. Sec. xi. "Of a Particular Providence and of a Future State."

45. Now, the greater the difference between the works of Creation and those of Man, the stronger is the argument against the truth of the axiom on which the above reasoning is founded. For, I maintain, that no unprejudiced man, in the full enjoyment of his Intellect, can examine narrowly the works of Creation, *for the first time*, before custom has rendered them familiar, without being convinced of the existence of a Deity. Let the marvellous structure of the human body be unveiled to a young man, for the first time, by anatomy; let him study the formation of the eye, and the beautiful provision for refracting the light and throwing it on the Retina; or let him examine the hand, and observe how the tendons are perforated exactly in the proper places to allow other tendons to pass through to move the further digits; and he must be a dolt if the belief in a God do not come upon him with a force to defy all Scepticism.

46. This uncontrollable Belief is not only a proof, the strongest possible, of the being of God, but it also disproves the axiom that the Intellect is chained down by Experience; for we allow the difference between the works of God and the works of Man, and the greater the difference the stronger the argument against the truth of the axiom. No doubt there is an analogy between the works of Creation and our own, whatever Hume may say to the contrary, an analogy which

may help to open up the Intellect to see design in nature; but this consciousness of design must be chiefly the work of the Intellect itself, because we never witnessed the formation of an animal or a plant, or anything much like to either.

It is not then because the works of nature are similar to a house, a watch, or a steam-engine, which I know to be effect of man's design, that I *infer* that an animal or a plant is also the result of design. I see the design at once, *il saute aux yeux*, as the French say, it is almost, if not quite, self-evident. No doubt a cultivated mind is required, and the instances of man's design which we have witnessed must have taught us to detect design in other and very different instances; but, we do not argue from the one to the other; we have no occasion so to argue; for the mind, so prepared, sees design in nature at once. Is any argument required to prove that the tendons of the hand above alluded to were perforated on purpose to admit the other tendons? Can this admit of a question? Does not even the irreligious Anatomist and Physiologist tacitly and unavoidably admit design though he openly deny a designer? For does he not constantly discourse of the *functions*, the *uses*, the *purposes* of the various organs? and what do these words imply? If he discover a new organ in any animal, does he for a moment doubt whether it be of any use? Nay, is not his whole object to find it out? And

does he not thus as really admit a Creator and Designer as if he acknowledged Him in set words? Thus, the Physiologist cannot discourse on his own subject, without at every moment contradicting Atheism.

Nay, more, as Reid has admirably observed, were the doctrine of Hume correct, it would be impossible to know that any work, even of man, proceeded from an Intelligent Cause; for, according to Hume, the Cause and the Effect must have been observed in conjunction; and, in this case, that can never be. We may see the hands of a man at work, but can we see the Intellect and the Will that direct and move them? Impossible; and, therefore, on this theory, did we see a watch made, all we could know would be that hands made it, but what guided the hands we could never tell. Surely this is a *reductio ad absurdum.* The case proves that design is never perceived through the senses, that, in the works of others, it is not, properly speaking, known by Experience, but inferred by Reason. The only Experience of the operation of design which we can have, is in our own case, when our mind and our hands work together; and having thus learnt the outward effect of a mental purpose, we can afterwards detect that influence, even in cases which bear but a faint resemblance to any work of ours. On so narrow a basis of Experience can the Intellect build a mighty super-structure, rising from Earth to Heaven, from Self to Deity!

47. From the view above taken of the question of Liberty and Necessity two very important inferences remain to be stated; first, that there is such a thing as a Practical Science of Human Nature; secondly, that such a Science can never become an exact one. If, on the one hand, the Will of man be, in a degree at least, obedient to known Causes, then, so far we can regulate that Will, or it becomes the subject of Practical Science; and if, on the other, it be only partially bound by Causes that can be calculated, then the Science must always be imperfect. And, that such is the fact at present, cannot be denied. There are many Sciences of a practical nature, the subject of which is the Will of man; namely, Ethics properly so called, which attempts to regulate the Wills of men as individuals, and Politics, which, in its largest sense, comprehends several subordinate Sciences, which profess to direct the Wills of men in Society. There *is*, then, a body of Practical Science, applicable to Human Nature. And who will maintain that this Science is not imperfect? Nothing can show its imperfection more forcibly than the fact, that it has been debated whether there were such a Science or not; and that philosophers have thought themselves obliged to prove the Affirmative. Did any one ever question the existence of Mathematical or of Physical Science? The innumerable disputes in Moral and Political Philosophy also prove how little it can pretend to be exact.

48. These two conclusions being allowed to be true at present, it may, nevertheless, be maintained, that the Science of Human Nature is still in a provisional state, that it is improving, and will improve till it become as exact as Natural Philosophy. Our opinion upon this point must depend upon the view we take of the question of Liberty and Necessity. They who think that the Human Will is subject to Causes which can be calculated as well as those which regulate the material world; that, though hidden for a time, they may be brought to light; they, in short, who maintain the doctrine of Necessity, may hope in time to see a Social Edifice of fair and uniform appearance, having Science for its Architect; but those who believe in Liberty will look upon the fabric as a vision. Enthusiasts and even Philosophers have not been wanting, who have endeavoured to re-model and regenerate man and Society by the application of a favourite Principle, at one time by enlightened Self-Interest, at another by co-operation or Socialism, but the signal failure of all such attempts has proved their vanity.

49. That difficulties attend the theory of Liberty, as here explained, is no valid objection, if equal, much more if greater difficulties attend the opposite theory. There is no self-evident absurdity in the supposition of action originating in Self; and we certainly can as easily embrace

this notion, as that of a perpetual circuit of Causes and Effects, without beginning, without end. Moreover, the undoubted fact of the origin of *motion* from volition gives greater credibility to the former hypothesis. But further, once believe in God, allow the existence of a First Cause, and the probability of self-originating action in man becomes increased; especially when confirmed by direct experience, by our own *Consciousness*, by *Conscience* or our feelings of responsibility, as well as by the universal opinion of others that our actions are in our own power.

50. The chief difficulty attending the doctrine of Liberty is derived from our belief in the fore-knowledge of God. Man may fore-know an event as highly probable, a physical event almost as certain, but this knowledge does not necessarily imply any power of promoting or hindering the result. I cannot doubt that the Sun will rise to-morrow, but the event is utterly beyond my controul. When, however, the Being who fore-knows an Effect is also the Author of all nature, and endued with all power, then it seems to follow that, if an event has been fore-known, it must also have been fore-willed, and if fore-willed, what becomes of the Liberty of man?

51. Such is the objection, and what is the answer? The answer is, that this objection to the Liberty of the Will is derived from our notions as to the nature of Deity, and his mode of operation

with his creatures, subjects excessively obscure, and almost out of the reach of the Human Intellect; whereas, our Belief in the Liberty of man is founded upon our own Consciousness, and our own Conscience, as well as upon the concurrent opinion of all mankind; that is, upon evidence which comes home to every one. Shall we reject evidence which we can appreciate, because we cannot solve a difficulty which it is impossible we should solve with our limited faculties? To judge of the agency of God we must become Gods or Angels, but to judge of ourselves we may remain men. Moreover, the objection goes to prove too much. It has been well observed by Dugald Stewart, that if the fore-knowledge of God be inconsistent with the Liberty of Man, then is it inconsistent with His own Liberty? Are Theistical Necessitarians prepared to admit this conclusion?

52. That a creature who sees so little as man, and that "through a glass darkly," should dogmatically assert that with God to fore-know is to ordain, that God has no means whereby to reconcile his Omniscience and Omnipotence with the Liberty of man, is certainly presumptuous, as well as unphilosophical. It is a moral offence, as well as an intellectual mistake. But on the strength of this assumption, to deny what we know and feel, is an outrage to common sense, as well as to common piety.

53. Suppose we adopt the opposite theory, do we then get rid of difficulties? We certainly do obtain a system of Divine agency, in one respect more in accordance with our own limited notions, a system, apparently, simple and harmonious. God fore-knows and fore-ordains everything, the actions of man as well as purely physical changes; and so far all is consistent. But then Human Liberty is at an end; and that man is free, our Consciousness and our Conscience assure us. You must then abandon the evidence of Consciousness and of Conscience; you must reject the uniform belief of all men in all ages, as an old wife's fable, belief in that which comes most near to them, *because* it seems inconsistent with the agency of a BEING, of whom we can know but little. And this is to get rid of difficulties!

54. The truth is, that not only the doctrine of Liberty, but many other tenets which we firmly believe, are liable to difficulties, to difficulties even insuperable. We surely believe that man consists of soul and body, the one immaterial, and therefore not confined to place, the other material, and existing in space; but, at the same time, we believe that the soul is united to the body, and consequently bound to place. Do we, then, alter our opinion, and reject the two-fold nature of man because of this difficulty? If not, why should we abandon our belief in liberty,

which we entertain as firmly as the other, because we cannot see how it can be reconciled with the fore-knowledge of God? In the case of the union of soul and body, the difficulty is greater than in that of Liberty, for it relates to a matter more near to us than the Divine Government of the universe, and in which, therefore, we might better expect a solution.

55. I believe that I am the same man now that I was twenty years ago. But, during that period what changes have I undergone! Not to mention my body, which has been entirely renewed, my mental disposition may have been quite reformed. Then I may have been dissolute, careless, worldly, irreligious; now I may be temperate, prudent, spiritual, godly; but for all that, am I not still the same? How am I to reconcile this sameness with so much change? I know not; but this I do know, that I cannot doubt my identity.

56. You believe in the existence of the material world. Assuredly. On what grounds? Do I not see it, feel it, everywhere around and about me? That you have sensations of sight and feeling is true, but what have sensations to do with matter? The one, confessedly, is totally different from the other, matter being supposed to be extended and solid, occupying space, and capable of motion,—Mind and its phenomena having neither extension, solidity, place, nor

mobility. How, then, can you *get at* the one from the other, how, from a mental state of which alone you are conscious, can you infer something else, not only different, but opposed? You are at a loss for a reply,—you know not,—you can only say that you cannot help believing in matter,—that this belief is a necessary part of your constitution, arising without reasoning and proof; nay, against all argument to the contrary, though unanswerable.

57. You believe in the uniformity of nature, that like Causes will continue to be followed by like Effects, that what has been will be. Can you give any reason for this belief? Experience has proved to me this uniformity. Yes, in time past; but what has that to do with the future? How do you know that all may not change by to-morrow, that the sun may cease to shine, the fire to warm, the grass to grow? I allow it to be possible, but it is highly improbable. Why improbable? Because a long Experience has confirmed my faith. I do not deny that long experience confirms your faith, that it is a *Cause* of belief, but I deny that it is any *reason*. This, then, is a sufficient answer to the metaphysician, but none to the logician. It *accounts* for the fact of your belief, but does not *justify* it. Your faith is still illogical, though I allow it to be firm and universal, an original part of our mental constitution.

58. And so is my belief in the Liberty of the Will. This belief is, I maintain, original, firm, and universal, like the belief in our personal identity, in the material universe, and in the uniformity of nature; and though, like them, attended with difficulties, nay, with difficulties which cannot rationally be solved, it defies all scepticism, and remains unshaken.

59. Honour, then, and thanks be to God, who has contrived to reconcile his own power and fore-knowledge with the Liberty of man.

SUPPLEMENT FIRST TO SECTION FOURTH.

OF THE WILL.

60. According to Hobbes, "he is *free* to do a thing, that may do it if he have the Will to do it, and may forbear if he have the Will to forbear." [f] Now, it can easily be shown that, according to this definition, every man is, nay, must be free; because the word *Will* really implies as much. No laws, not even the arbitrary decrees of a despot, interfere with Liberty, as thus understood; they only offer strong inducements to do, or to refrain from certain actions; but the man may, or may not obey those inducements. He may still

[f] Hobbes' Tripos: of Liberty and Necessity.

rob or murder, and run the chances of non-detection. He can still do as he Will. Nay, even a man in prison is free in this sense. He can do whatever he Wills; but then he is prevented from willing by the want of power to perform. If he know that he cannot perform, then he cannot Will; for undoubting Belief in the possibility of an action is an essential part of Volition. Thus, the sense given by Hobbes to Liberty is utterly nugatory, for it tells nothing more than what is contained in the meaning of the word *Will.* It is opposed neither to Slavery nor to Necessity; for a man would be free in that sense, though he were politically a Slave, or metaphysically fated.

61. Further on, in the same Treatise, we have the following account of Liberty: "*Liberty is the absence of all impediments to action, that are not contained in the nature and intrinsical quality of the agent.* As, for example, the water is said to descend freely, or to have *Liberty* to descend, by the channel of the river, because there is no impediment that way, but not across, because the banks are impediments. And though the water cannot ascend, yet men never say it wants the *Liberty* to ascend, but the *faculty* or *power*, because the impediment is in the nature of the water or intrinsical. So also we say, he that is tied wants the Liberty to go, because the impediment is not in him, but in his bands; whereas, we say not so of him that is sick or lame, because the impediment

is in himself." Now, not to dwell on the absurdity of applying the word Liberty to inanimate objects, instead of restricting it to Voluntary agents, which is its proper sense, the other being merely *metaphorical*, we may ask whether this be meant for a definition of Political or of Metaphysical Liberty? If the first be intended, then it is manifestly incorrect; for we have shown that Political Liberty is restricted not by every outward impediment, not by mere physical obstacles, not even by the actions of brutes, nor by the Law of God, but solely by the opposing Wills of our fellow-men. But if metaphysical Liberty be meant, then, to place it in *the absence of external impediments* is quite beside the question; for we enquire not whether a man be hindered by external impediment from doing what he wishes; but whether, first, his wishes, and last, his Will, be regulated by Causes over which he has no Self-controul. Thus, Hobbes, as well as some other necessitarians, not daring openly to deny Liberty to man, have been obliged so to alter the meaning of the word, as to be able to assert that Liberty may co-exist with Necessity.

62. It is surely a strong argument against necessity, that it is repugnant to the moral sentiments, and inconsistent with the language of all mankind. Thus, the opponent of Hobbes "disputeth against the opinion of them that say, *external objects* presented to men of such and such

temperaments do make their actions *Necessary;* and says, the power such objects have over us proceeds from our own fault;" "but that," replies Hobbes, "is nothing to the purpose, if such fault of ours proceedeth from Causes not in our own power, and, therefore, that opinion may hold true for all that answer."[8] Now, to say that an action proceeds from our own fault, and at the same time that it proceedeth from Causes not in our own power, is inconsistent and illogical; for the word *fault* implies that it was in our power to do or not to do. Therefore, the moral vocabulary, as well as the moral sentiments of mankind, must be altered to suit the doctrine of Necessity.

63. Since the word *Spontaneous* occurs so frequently in discussions on Liberty and Necessity, particularly in this Discourse of Hobbes, it is necessary to fix its proper meaning; more especially as two meanings are attached to this word by Hobbes himself, (generally an exact writer) inconsistent with each other, and both of them differing from the usual sense. First, he says, that "all *voluntary* actions, where the thing that induceth the *Will* is not *fear*, are called *Spontaneous*, and said to be done by a man's *own* accord. As when a man giveth money voluntarily to another for merchandise, or out of affection, he is said to do it of his own accord, which,

[8] Hobbes' Tripos: of Liberty and Necessity.

in Latin is *sponte*, and, therefore, the action is *spontaneous*, though to give one's money willingly to a thief to avoid killing, or throw it into the sea to avoid drowning, where the motive is *fear*, be not called *spontaneous*."[h] But, in the latter part of the same Discourse, we are told that a spontaneous action signifies one without previous debate or deliberation, "that by *Spontaneity* is meant *inconsiderate action*, or else nothing is meant by it." Now these two senses of the word *Spontaneous* are inconsistent; for surely an action may result from *fear*, and yet be inconsiderate, nay, such actions most frequently are so; and, therefore, the action would be at once non-spontaneous, as resulting from fear,—spontaneous, because inconsiderate. And, not only are these two meanings inconsistent with each other, a logical fault, but neither of them is the usual sense of the word *Spontaneous*, an offence against the propriety of language. When we say that a plant grows spontaneously in a certain spot, we mean that it was not there planted by the hand of man. The spontaneous productions of the earth are those on which no human labour has been bestowed. So, a spontaneous action is one which a man performs of his own accord, *proprio motu*, that is, *without any direct suggestion and solicitation from another.* A spontaneous action is of course Voluntary, but

[h] Hobbes' Tripos: of Liberty and Necessity.

every voluntary act is not spontaneous; for out of all the possible inducements to the Will we except those arising from the direct suggestion and solicitation of our fellow-men, and then call the act spontaneous. What the motive may be we pretend not to say; only it was not directly put into our head, and urged upon us by another. *Spontaneity*, to use a word as old as Hobbes, does not settle the question as to Liberty and Necessity; for though a man act without another's suggestion and solicitation, yet, there may, or may not, be other causes which render his action necessary.

SUPPLEMENT SECOND TO SECTION FOURTH.

OF THE WILL.

64. In the preceding inquiry we have supposed that there are but two possible doctrines in respect to the Will, the doctrine of Liberty, and that of Necessity, and so it has generally been thought; but an attempt has been made in our days to combine the two into one system. And as this attempt has been made by one of our most distinguished authors, it demands some notice in this place.

The system, as proposed by Mr. Mill, appears to me to be this. On the one hand, he allows that we are able to modify our own character, *if we wish*, and so far we are free; but, on the other, the wish is formed not *by* us but *for* us; it is as dependent upon outward Causes as physical nature, and so we lie under Necessity. The former opinion is thus stated.

"And indeed if we examine closely we shall find that this feeling of our being able to modify our own characters, *if we wish*, is itself the feeling of moral freedom which we are conscious of. A person feels morally free who feels that his habits or his temptations are not his masters, but he their's, who even in yielding to them knows that he could resist; that were he for any reason desirous of altogether throwing them off, there would not be required for that purpose, a stronger desire than he knows himself to be capable of feeling."[1] So far well for the cause of Liberty.

65. But then, we are told that "Our character is formed by us as well as for us, but the wish which induces us to attempt to form it, is formed for us; and how? not, in general, by our organization, nor wholly by our education, but by our own experience, experience of the painful consequences of the character we previously had, or by some strong feeling of admiration or as-

[1] System of Logic, Book VI. chap. ii.

piration accidentally aroused."[k] Here, on the other hand, we have the doctrine of Necessity.

If it be allowed, as above, that we are able to modify our own characters, *if we wish*, and if it be also true, as generally granted, that wishes arise out of previous character, that out of the heart proceed good or evil desires, then is there a constant action and re-action between the more permanent character, and the temporary desire or wish. This we take to be the moral course of the human mind, a course of much activity, in which Desire performs a prominent part, acting and acted upon. During this career a great change may be effected, entirely by the mind itself; and though the first wish may be traced to some outward circumstance *operating on the mind*, yet, the mind must have been prepared, or the circumstance could produce no effect. We do not deny the force of outward circumstances, but we say that it is most unwarrantable to assume them as the only causes of Desire and Wish, forgetting that active and inward life, which, starting from a feeling, possibly suggested by something foreign, can so work upon it as to make it chiefly of native growth. The culture, at least, if not the planting, belongs to Self. Unless Mr. Mill deny that our wishes depend, in part, at least, upon the previous character, that

[k] System of Logic, Book VI. chap. ii.

is, upon Self, the Necessitarian part of his scheme cannot stand, for he himself allows that we can modify our character by an antecedent wish.

66. "Correctly conceived, the doctrine called Philosophical Necessity," says Mr. Mill, "is simply this, that given the motives which are present to an individual mind, and given, likewise, the character and disposition of the individual, the manner in which he will act may be unerringly inferred; that, if we knew the person thoroughly, and knew all the inducements which are acting upon him, we could foretell his conduct with as much certainty as we can predict any physical event."[1]

Nothing is more easy than to arrive at any conclusion by means of a supposition. If I suppose that the Sun will not rise to-morrow, I can predict infallibly that it will be dark. Now, the supposition above made is nearly as extravagant, for to know all the motives present to any man's mind, and to know thoroughly the character and disposition of any individual, is simply impossible; for no man knows himself so accurately. And even suppose that a man's motives and disposition be perfectly known *at this moment*, how can you venture to predict, positively, what they will be a month, a week, or even a day hence, whenever an occasion for action arrives? If you can, then

[1] System of Logic, Book VI., chap. ii.

you must take for granted the whole question, as to the Necessity of the Will, by denying that power of Self-change which the advocates of Liberty maintain. No man ventures to foretell with certainty his own actions, and shall another be more knowing? We do not deny that causes operate upon the Will; but we maintain that many of these (and the most important) are of native growth, and so cannot be calculated. Mr. Mill himself agrees to this, when he allows that we are able to modify our character *if we wish.* This admission is fatal to the doctrine of Necessity; unless, indeed, the Wish itself be utterly beyond our controul. But all, or almost all, admit that Desires or Wishes depend in part on previous character and disposition, that is upon Self.[m] Thus, Mr. Mill's edifice of Necessity is upset by the efforts of both foes and friends. The Architect himself knocks down one of the two main pillars of support, his opponents the other, so the whole falls to the ground.

67. One word more, in answer to those who maintain that our character is entirely formed *for* us by outward circumstances. They who

[m] "Out of the heart proceed evil thoughts, murders, adulteries, fornications, thefts, false witness, blasphemies: these are the things which defile a man." Matt. xv. 19, 20. Now, what is the heart, but the moral character and disposition, and how can murders, adulteries, occur without a previous Desire or Wish? Out of the heart proceeds the Desire or Wish, leading on to Volition and Action.

hold this opinion fully allow that those circumstances may be changed by others; nay, the very foundation of their system is that man may be made any thing we please by a suitable education, that is, by a proper adaptation of outward circumstances to the end in view. Now, how can it be maintained that others can make a choice among circumstances in order to work upon me, and I cannot make any selection for myself? What! others have all power over my character, and I myself have none. Do I know nothing of my own vices, faults, and weaknesses, or, knowing them well, can I not avoid the circumstances which favour such vices, faults, and weaknesses? If I cannot, then why should others have that dominion over circumstances which I have not? In reality, the Owenite allows free-will to others, but denies it to himself? Is, or, is not this an absurdity?

PART III.

THE THOUGHTS.

CHAPTER I.

OF THOUGHT IN GENERAL, AND OF THE PROXIMATE POWERS OF THE HUMAN MIND.

1. Having treated of the First Great Class of the Mental Phenomena, the Feelings, comprising the Sensations and the Emotions, we must now turn our attention to the Second Class, which embraces all purely Intellectual States of mind, or, in one word, the Thoughts.

2. Thoughts, as we have seen, are distinguished from Sensations, as well as from the Emotions, by their neutral character, the absence of Pleasure or Pain, Happiness or Misery; for though these frequently, nay, generally accompany our Thoughts, yet they do not constitute them even in part; and though Feeling and Thought were inseparable in reality, yet they could be readily and clearly distinguished on reflection. It belongs to the Metaphysician to analyse what is compounded, and to present separately to the mind what is generally found united.

In like manner, though Sodium be never found naturally separate from Oxygen, yet the Chemist by artificial means can analyse Soda, and exhibit the elements apart.

3. In Part First, Chapter Second, we gave a general Classification of the Mental Phenomena, particularly of the Thoughts, showing their various kinds, and how one differs from another. These are the elements from which the more complex Phenomena of mind result. We must now take these more complex Phenomena, and discover the elements of which they are composed.

4. Again, in Part First, Chapter Third, we stated that as each distinct kind of Phenomena must have a distinct Power belonging to it, therefore, the number of mental Powers must be the same as of mental Phenomena, and the classification of the one the same as that of the other. Consequently, that the three Ultimate or Elementary Powers of the Mind are the Powers of Sensation, Emotion, and Thought, or Intelligence; and, from these *Ultimate* Elements, variously modified and compounded, all the *Proximate* Powers are derived. It remains to enumerate these Proximate Powers, and to analyse them if possible.

CHAPTER II.

OF CONSCIOUSNESS.

1. By some philosophers, as by Dr. Reid, CONSCIOUSNESS has been considered as a distinct Power or Faculty, and, as such, classed along with PERCEPTION, CONCEPTION, IMAGINATION, MEMORY, ABSTRACTION, JUDGEMENT, REASONING, on the same line, but different from all of these. This, however, can by no means be admitted.

2. For, in the first place, Consciousness is inseparably connected with each of the above powers, and is even essential to their existence; so that, without Consciousness, there can be neither Perception, nor Conception, nor Imagination, nor Memory, nor Abstraction, nor Judgement, nor Reasoning. Now, what is essential to the existence of anything cannot be separated from it even by reflection, without destroying the nature of the thing. Could we, then, suppose Consciousness to be taken away from Perception and the other powers, the result would be *nil*, or we know not what.

3. In the acts of Perceiving, Conceiving, Imagining, Remembering, Judging, and Reasoning, there is not both an act of Perception, etc., and the Consciousness of that act, but these are one and the same; so that if we Perceive we are Conscious; and if we are Conscious of a Perception, we Perceive; and *vice versa*, if we do not Perceive, neither are we Conscious, and if we be not Conscious, neither do we Perceive. In short, Consciousness is indispensable to every mental act which comes within the scope of Metaphysics; for it is not disputed that the Mind may have an influence on the body of which we are not Conscious, and which, therefore, belongs to Physiology, or the science of animal life.

4. If, then, Consciousness be essential to every mental power above enumerated, it is utterly illogical to class it as distinct from all and each; for no class should over-lay another. As it is essential to each, it must be above all, not on the same line, and must stand alone. Thus, Consciousness becomes a general term, comprehending all the mental powers, but not any one more than another.

5. Should we be inclined to restrict, in any degree, this wide and indiscriminate use of the term *Consciousness*, we would propose one limitation, as agreeable to the common notions of mankind, and to the common use of language. The term generally is, and perhaps ought to be,

confined to the purely intellectual faculties, of which we are now treating. Thus, we seldom say that we are Conscious of a Sensation, or of an Emotion, but we *feel* them; whereas, we are *Conscious* of any thought or train of thought. Consciousness seems to imply knowledge, and knowledge belongs to the intellectual faculties.

6. Again, while Consciousness belongs essentially to each and every mental power, each of these powers is not essential to the other. Thus, I can Perceive an outward object without an act of Memory, I can Remember without an act of Perception, I can Imagine without Remembering, or Reason without Willing. Therefore these powers may be classed on the same line, but apart,—while Consciousness cannot, because it is common to them all.

7. "Consciousness," says Reid, "is an operation of the understanding of its own kind, and cannot logically be defined. The objects of it are our own present pains and pleasures, our hopes, our fears, our desires, our doubts, our thoughts of every kind,—in a word, all the passions, and all the actions and operations of our own minds, while they are present. We may Remember them when they are past, but we are Conscious of them only while they are present."[a]

8. The inaccuracy of this statement is evi-

[a] "Reid's Intellectual Powers, Essay VI., chap. v.

dent from what we have already said. Moreover, we would ask, where is the necessity for this doubling of the Mental Phenomena, first a pain, a desire, a thought, and then the Consciousness of the same? First a mental object, and then the Consciousness of that object? Surely this is contrary to the simplicity of nature.

9. In the view here taken, Consciousness has no distinct object; it is simply the mental state at the present moment. Whatever that may be, of it we are conscious; the act and the object are one and indivisible.

10. Consciousness, then, is limited to the present, and, under that restriction, the knowledge which it conveys is perfect and free from all doubt; for whatever the feeling or thought of the moment may be, we must know it, since it is what we are Conscious of, and nothing more; and we cannot doubt of its existence, for the very doubt would be itself a phenomenon of Consciousness, and therefore would contradict the supposition that we could doubt the existence of what is present to the mind. We may doubt whether we ever had any Feeling or Thought before, or whether we shall have any in future; but, of the Feeling or Thought of the present moment, we, therefore, cannot doubt. This knowledge, at least, is proof against scepticism. We may question the accuracy of Memory, we may doubt the Uniformity of Nature in time to come,

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we may deny the existence of Matter, we may even distrust our Reasoning powers, and dispute about our own Identity; but we must allow the evidence of Consciousness. And all human knowledge being founded on this, it is founded on a Rock. The direct or immediate evidence of Consciousness, is no doubt, very limited. Of the world without us, of the Non-Self, it tells nothing, and, even of Self, nothing but the present state. Still, as all our knowledge is based thereupon, it is satisfactory to know that the foundation is unassailable.

11. Does Consciousness necessarily imply Belief? The affirmative is maintained by Dr. Reid. "We have an immediate conception of the operations of our own minds, joined with a Belief of their existence, and this we call Consciousness." — "There are many operations of mind in which, when we analyse them as far as we are able, we find Belief to be an essential ingredient. A man cannot be Conscious of his own Thoughts without believing that he thinks."[b]

12. This statement contains two assertions, both of which appear to me questionable. In the first place, actual Belief appears to me to suppose the possibility of Unbelief; and where Doubt is impossible, so is Belief. Belief seems to be the result of a mental operation where opposite views

[b] Intellectual Powers, Essay II., Chap. xx.

are presented to the mind; so that where no opposite views can be entertained, neither doubt nor belief can arise. And such, we have seen, is the case with Consciousness. Therefore, Belief forms no element thereof.

13. We allow that Nature does nothing in vain. But where is the use of Belief when we cannot doubt? The evidence of Consciousness is, then, above all other, being above both doubt and belief. In Consciousness, we *feel*, we *think*, we *know*; but we do not also *believe* that we feel, think, or know.

14. But, secondly, even were it true that Belief is an element of Consciousness, still it would by no means follow that a man could not be conscious of his own thoughts without believing that *He* thinks. Here a new idea is introduced, that of Self or Mental Identity; and this does not arise at once, on a single act of Consciousness, but it requires two acts at least, and an act of Memory besides. It is by Memory, by comparing a past Feeling or Thought with the present, that we come to believe in our Identity; and, consequently, one act of Consciousness, one Feeling or one Thought, may exist without any notion of Self at all. We may believe, if you so think, in the existence of the present mental state; but you cannot maintain that Belief in our Identity is essential to Consciousness.

CHAPTER III.

OF PERCEPTION.

SECTION FIRST.

OF THE NATURE OF PERCEPTION.

1. Before the days of Reid, the term Perception was used in a very general sense, by Des Cartes, Hume, and many others, so as to embrace all the phenomena of mind, whether Feelings or Thoughts;[a] but, by the chief of the Scottish school of philosophy, the word was limited to express *that Mental Faculty whereby we become acquainted with the world without.* This was an important improvement in metaphysical language; and it has since been generally adopted, as it is here.

2. As our Feelings come before our Thoughts in the order of mental development, so do our Perceptions precede our other Thoughts. We must

[a] Thus, Hume says, that, "we may divide all the *perceptions* of the mind into two classes or species, which are distinguished by their different degrees of force and vivacity." These are his IMPRESSIONS and IDEAS, which, according to him, embrace all the mental phenomena. Essays, Vol. II. Sec. ii.

have *felt*, or experienced Sensation, before we can *Perceive* an outward object; and we must have perceived a present object before we can *Conceive*, or *Judge*, or *Reason*, about an absent one. Therefore, as Feelings have been treated prior to Thoughts, so of these the first to be considered are Perceptions.

3. The doctrine of Locke, that we have no Innate Ideas, seems to amount simply to this, that we have no Thoughts prior to Sensation. Not that our Thoughts are only Sensations in another form; by no means; but, that Sensation is necessary to the development of Thought, a Mental Phenomenon specifically different from the other. The mind of man, previous to Sensation, may be compared to the embryo of plants, which, though it contain the rudiments of the tree, or shrub, or herb, yet requires heat and moisture to favour its growth. So the mind must have many dormant faculties, or Sensation would stop there; we should be sensitive animals and nothing more. But, given the latent power, the slumbering capability, and Sensation can rouse it into life. How Sensations stir up Thoughts, so different from themselves, so far removed from sense, so wide in their range, so deep, so sublime, is no doubt incomprehensible; but surely not more so than how Matter acts at all upon Mind, or Mind upon Matter. Sensation, after all, is a Mental Phenomenon, and therefore

there is more resemblance between it and the highest flights of Reason or of Fancy than between the world without and that within.

4. The connection between these last is a great mystery, which, however, we are bound to accept, and not to deny because it may seem strange that substances so incongruous should directly effect each other. Philosophers have been slow to admit this direct and mutual agency, and have invented many hypotheses to break the difficulty, but without success,—for they have framed systems more complicated than nature, but not more comprehensible.

5. In the endeavour to bridge over the gulph which separates Mind and Matter, the *Sensible species* of the Schools were first invented, passing from the outward object to the Mind or subject, but distinct from either, of a doubtful nature, whether material, immaterial, or something between the two; afterwards arose the *Ideas* of Des Cartes and his followers, the immediate objects in Perception, and decidedly immaterial in their nature; subsequently, these same Ideas supposed to be seen in God, according to Malebranche; then the pre-established harmony of Leibnitz; till at last the knot was cut by Berkeley and Collier,[b] who, admitting nothing but Imma-

[b] Arthur Collier, Rector of Langford Magna, near Sarum, published in the year 1713 a work called "Clavis universalis," to disprove the existence of the material world. His arguments

terial Ideas and Spirits, denied the existence of Matter altogether.

6. All these ingenious but false systems owe their origin to one unsound axiom, long universally admitted, namely, that the Cause and the Effect must be like each other, an axiom agreeable to the imagination which delights in similitudes, but for which there is no proof. Thus, in this case, as the object existing outwardly, and the subject or Mind knowing inwardly, were allowed to be very different, some *medium* was sought by which they might communicate. Hence the invention of Sensible Species, of Ideas, etc., by means of which outward objects might affect the mind, and of animal spirits, through which the Will might act upon the body. But the above axiom being abandoned, as directly contrary to experience, of course all the systems derived from it must also be given up.

7. After these preliminary observations, we may proceed to trace the phenomena of Perception. First, we must carefully distinguish the outward material object said to be perceived, from the percipient subject or Mind,—and then, in the mental process, we must discriminate between the Sensation proper which precedes, and

are similar to Berkeley's, with whose work he appears to have been unacquainted, though Berkeley's "Principles of Human Knowledge" had been published three years before. Collier's book is extremely rare.

Perception proper which follows. The last alone belongs to the class of Thoughts,—though the two, the Sensation and the Perception, are often confounded together and considered as one.

8. With respect to the outward object, one important observation must be made, namely, that some of our Senses are affected *immediately*, others only *mediately*, by objects. Thus, I feel the table immediately by touch, but I see it only mediately by the intervention of the rays of light passing from the object to my eye. So, I taste objects in contact, but I hear or smell them at a distance, through the pulsations of air and odorous effluvia. Still, in every case, there is contact of something with the organ of sense, whether of the object itself or the medium.

9. Is not then the medium the proper Object? All we can answer is, that it is never so considered, never so called. I say, and all men say, I see and perceive a rose, not the rays of light reflected from a rose to my retina; I hear a bell, not the pulsation of air; I smell a carnation, not the effluvia thereof. Therefore the rose, the bell, the carnation, are universally considered as the Objects. Consequently, these may be divided into Immediate and Mediate, or near and remote objects. And we shall find that this distinction is of great importance, when we come to trace the origin of Perception.

10. Next we must attend to the distinction

between Sensation and Perception proper, a distinction often disregarded, even by Locke and other excellent authors; but clearly pointed out and dwelt upon by Reid. Sensation always precedes Perception proper, and is indispensable to it, but the one being a *Feeling*, the other a *Thought*, they are essentially different. We have seen that Sensation alone gives us no knowledge beyond itself, no acquaintance with the world without. What we feel in Sensation, of course we feel, and nothing more. Had we been Sensitive beings alone, we never should have known the existence of outward objects, nor, in fact, anything except the passing Sensation.

11. We have seen, in treating of Sensation, that the Sensations which accompany Perception proper are of very different degrees of importance,—that those which attend the Perception of the Primary Qualities of matter, Extension, Solidity or Impenetrability, Mobility, etc., are in general little noticed; while the Sensations which go along with the Perception of the Secondary Qualities, Colour, Sound, Taste, Smell, are often very interesting and fill our minds. In truth it may be laid down as a general law, learnt by experience, that the more we are occupied with the Sensation, the less are we taken up with the Perception proper; and *vice versâ*. Moreover, this would follow from another more general Law of mind, namely, that the more we

are engaged with one thing, the less can we be occupied with another; which again is derived from a still more general fact, that the capacity of the mind is limited. This observation, again, may be of use to us when we come to trace the origin of Perception.

12. In treating of the nature of Perception proper, we must take it as it exists in the mature mind, not in the mind of an infant; and we shall attempt to analyse it accordingly.

13. First, then, it is evident that when we perceive an outward object, say a tree or a house, we have a NOTION or conception of the tree or of the house. This will not be disputed.

14. But we can shut our eyes, we can travel a hundred miles away, and still have a notion of the tree or of the house; consequently a notion or conception is not the whole of Perception.

15. I perceive a post or a pool of water in my path, and I turn out of the way to avoid it, and that without an instant's hesitation; consequently I believe at once in the existence of the post or of the water before me and without me. Therefore, *BELIEF* in the existence of an object present before us and without us, capable of impeding our progress, and, consequently, having the common properties of matter, forms an essential element of Perception proper. The notion of the object, and the Belief in its present existence are, as far as we can observe, simultaneous,

—no appreciable time intervenes between them.

16. It is not here as in the case of simple consciousness, where we cannot doubt and therefore cannot believe; for there is no absurdity, no contradiction; in supposing that the object after all may not exist. We believe it to exist,—of that belief we are conscious and cannot doubt; but we may doubt whether the belief be well founded, whether there really be an outward material object or not. At least there is here no contradiction. Nay, we know very well that we often do believe the present existence of objects which have no such existence, namely, in dreams. There woods, rivers, plains lie before us, and are firmly believed in, though they be unreal; imaginary precipices sink down at our feet; wild bulls, lions, and tigers, of our own creation, call up no mimic terrors. Therefore, as we may be deceived as to the existence of the object, we may doubt, and if we can doubt, we can believe.

17. The result of our inquiry then is—that a *Notion* of an outward material object, and *Belief* in its present existence before us, are the two elements of Perception proper, elements so combined as to form but one Compound State of mind.

18. But these same elements often co-exist in dreams; would you therefore say that in them we perceive? We should not say so, because when we awake we know that it was but a dream,

we are aware of the difference between the dreamy and the waking Perception, though this difference cannot be expressed in words. We are conscious, however, of the difference, and therefore we call the one Perception real, the other imaginary, though the mental phenomena are so alike as to defy metaphysical analysis.

19. When we say that we believe in the present existence of the object before us, this means that we believe in its existence at a greater or less distance from us in *Space*, and at the present Time. The former simple notion is certainly comprehended in our Belief, for we cannot believe in the existence of a material object without believing that it occupies Space; but the latter may not actually be developed in us unless the object move. The notion of Space, then, seems to be inseparable from Perception, but not that of Time. Moreover, it is only by Perception, which makes us acquainted with the material world, that we can acquire the notion of Space; whereas, the succession of Thoughts in our own minds, however arising, and of whatever kind, would give us the notion of Time.

20. Thus we find that Perception, in its largest sense, comprehends three different mental phenomena—a Sensation, a Notion, and a Belief, which also necessarily supposes the notion of Space. The whole process, therefore, comprises Mental Phenomena of three different

sorts, SENSATION, Non-relative Thought or NOTION, and BELIEF.[c] Such is that Perception whereby we become acquainted with the world without.

SECTION SECOND.

OF THE ORIGIN OF PERCEPTION.

1. In the above Analysis, we have considered Perception as it is found in the mature mind; but the important questions remain, is Perception at once perfect or is it acquired, and what is its Origin?

2. Let us first consider the senses of Smell and Hearing, and endeavour to discover whether our knowledge of the world without be derived from these.

3. The Sensation of Smell is occasioned by the contact of minute odoriferous particles with the organ of Smell, the innumerable small branches of the Olfactory nerve ramified within the nose; and the Sensation of Hearing is caused by vibrations of air striking upon the drum of the ear, and affecting through it the complicated

[c] For the distinction between Feelings and Thoughts, and between Non-relative Thoughts or Notions and Relative Thoughts or Relations, see Part I., chap. ii. of this work.

internal organ. In both these cases, the object of Perception, the odoriferous, or the sounding body, being at a distance, it seems improbable, *a priori*, that any knowledge of them can be acquired by means of the minute particles which flow from the one, or the atmosphere set in motion by the other.[d]

4. Of the minute particles themselves, directly in contact with the nose, sense tells us nothing, nor of the vibrations of air which touch the ear; these are subsequently learnt; can we, therefore, suppose that sense gives us more information with respect to the distant objects? Are we likely to know more of the remote than of the near? Reasoning, it is clear, can teach us nothing, for want of data; so that if we do perceive the objects of Smell and Hearing, the knowledge must be instinctive, not acquired.

[d] In the cases of Smell and Hearing, as well as in that of Sight, we have, as already observed, in accordance with common language, which ought not to be changed unnecessarily, called the distant body, the Object; though some philosophers would give that name to the medium in contact with the Organ. This, however, would lead to erroneous views, for, though it certainly is the medium which directly causes Sensation, yet we cannot be said to *perceive* the medium, and in reality we never do say so. We are sensible of smell from odoriferous particles, but we perceive a rose as the cause thereof or object; we hear a sound from the movement of air, but we refer that sound to a bell; we feel colour from light, but we perceive a red coat. Common language, and common sense, must not be disregarded in Metaphysics; for all men are by nature, more or less, metaphysicians, and cannot help being so.

5. But can we, even now, in our mature state of mind, perceive any object by means of these senses when the object is not already known? Suppose we shut our eyes, and make no use of our hands, can we describe an object placed under our nose giving out a scent that is new to us? Could an Esquimau in such circumstances describe an orange? Could he tell any thing about it, as to shape, size, consistency, or colour? I trow not. So, were I to hear a noise, such as I never had heard before, could I say from what it proceeded? Had I never seen or handled a bell, could I describe it on hearing the sound thereof? Could a savage fresh from the woods, however exquisite his hearing, have the least notion of such an object? Assuredly not. Therefore, it is not only probable, *a priori*, but it can be proved by actual experiment, that the Senses of Smell and Hearing give us no knowledge of external objects. Consequently, Perception does not originate with them, and whatever knowledge of the world without they may afterwards give us, that must first have been gained by means of some other sense.

6. Let us next consider the Sense of Sight. This agrees with the two former, inasmuch as the object, usually so called, strikes the Sense only through a medium, namely, the rays of light reflected from that object upon the expansion of the Optic nerve, the Retina of the eye. Conse-

quently, whatever probability there be, *a priori*, against the original Perception of objects by Smell and Hearing, the same must exist against original perception by Sight. It is just as improbable, *a priori*, that we should be able to determine the size, figure, and distance of objects, originally by Sight, as by Smell or Hearing. Of Light itself, though in contact with us, the Sight tells us nothing; is it then likely that it should inform us more about an object at a distance?

7. Why should a Sensation of Colour give us a knowledge of an extended, solid, coloured Substance? Of course, no reason can be assigned, but this is no proof that it is not so. There *may* be original knowledge thus communicated relative to the world without; but if we allow that Smell and Hearing let in no such knowledge, as *has been proved*, then is there a strong probability against Sight also, for the circumstances attending the three are similar.

8. This is a case which admits not of so easy an appeal to Experience as the two former, because the sense of sight is undoubtedly much more quick and accurate in detecting objects in mature life than either smell or hearing. We allow that it is better trained. Still we have experience sufficient to decide the point. Persons of mature mind, in the enjoyment of all the intellectual faculties, but blind from infancy, have, by an operation, been restored to the per-

fect use of their eyes, without being able at first to discriminate objects by sight, either as to size, form, or distance. A new world, a world of *colour*, was, for the first time, opened out before them, but neither form, magnitude, nor place. All was confused colour, and close to the eye.[e] But that eye was physically perfect, and by degrees came to see like the eyes of others, *without any subsequent operation.* Thus was it *proved* that our knowledge of the world without is not derived originally from vision; that in truth we learn to see objects. We must look then to some other sense for the origin of Perception.

9. The two remaining senses of Taste and Touch agree among themselves, and differ from the rest in this, that the objects, commonly so called, of both, must be in contact with the organ of sense, the object of Taste with the tongue or palate, that of Touch with any part of the body. Herein, therefore, there is a marked distinction between these two and the other senses, which

[e] "He," (the patient) says Cheselden, "knew not the shape of any thing, nor any one thing from another, however different in shape or magnitude; but upon being told what things were, whose form he before knew from feeling, he would carefully observe, that he might know them again; but, having too many objects to learn at once, he forgot many of them, and (as he said) at first he learned to know, and again forgot a thousand times in a day." To Bishop Berkeley belongs the merit of having anticipated the results of this experiment by reasoning *a priori*, in his "New Theory of Vision."

are in contact not with the objects perceived, but with a medium.

10. Consequently, the distance of the object from the organ cannot be alleged against these two senses, as against the others, as an argument unfavourable to the supposition, that our knowledge of external nature is thence derived.

11. Moreover, it being already PROVED that our knowledge of the world without is not derived either from Smell, or from Hearing, or from Sight, it must be derived from Taste or from Touch, unless some sixth sense can be pointed out. We have then to choose only between these two.

12. In the first place, the sense of Taste is limited to a few objects, and on that account it seems unlikely that our far more general knowledge of outward nature can be derived from this source. Comparatively few objects have any taste, and very few are those which a child actually does taste.

13. Besides, the Sensation of Taste is so interesting in itself, that it is apt to engross our attention to the exclusion of every thing else. In this respect it resembles the Sensations of Smell, Hearing, and Sight.

14. The sense of Touch, on the other hand, extends to all solid and liquid substances, and is exerted not merely occasionally, as Taste, but at all times, and by all parts of the body. Here

there is a source sufficiently general to account for our general knowledge of outward things.

15. Moreover, the Sensation of Touch is usually of little interest in itself. Some degree of pleasure may be felt by passing one's hand over a smooth surface, but it is insignificant. It is chiefly by excess that the Sensation of Touch affects us, and painfully.

16. But if the Sensation of Touch be not given us for enjoyment, we must suppose that it was granted for some farther and useful purpose, if we believe that nothing has been made in vain. And what purpose more probable, what more important, than the knowledge of the world without us, on which our very being depends?

17. It is therefore far more probable that our acquaintance with the material world is derived through the Sensation of Touch than through that of Taste; and as Smell, Hearing, and Sight have been proved to give originally no information, therefore we may conclude that to Touch, and to it alone, are we originally indebted for all we know of the world around us.

18. We see from the foregoing, that Sensations have been given us for two different purposes — for immediate enjoyment in themselves, and for knowledge through them, and that these vary conversely; the more the enjoyment the less the knowledge, the less the pleasure the more the information. The Sensations of Smell,

Hearing, Sight, and Taste bring their own reward along with them, and are dwelt upon accordingly; but Touch is of value chiefly as leading to Perception, the mere Sensation being little attended to.

19. The whole difficulty lies in tracing the *origin* of Perception, and in *accounting* for it; for, these points being settled, the rest may all be explained by the Principle of Association. To this are we indebted for the information subsequently obtained through our other Senses. Supposing that through Touch we become acquainted with the forms, magnitudes, and relative distances of objects, it is easy to see that a certain object, already known by Touch, may be so associated with a certain Smell, Sound, Sight, or Taste, that any one of these Sensations shall instantly suggest that object in its due form and proportion, without the actual employment of Touch. And by long custom, from our earliest years, so rapid may be the suggestion, as not to be distinguished from original knowledge.

20. The information subsequently afforded through our other Senses being thus explained, and the first information being traced to Touch, we may still inquire, 1. Whether this Primary Perception can in any way be accounted for, or whether it be truly original and unaccountable; 2. Whether we can rely upon the knowledge thus obtained.

21. I can see no reason for doubting whether Primary Perception be an original faculty, in other words, ultimate and unaccountable. How can we explain the fact that a certain Sensation of Touch, and, as such, a Mental Phenomenon, without extension, without solidity, without parts, without mobility in space, is the medium through which we become acquainted with an extended, solid, divisible, and moveable substance, distinct from the percipient mind? On what known principle can we account for this wonderful fact? There is here no room for association, for association must have a beginning, and things must first be somehow brought together, somehow related, before the one can call up the other; neither is there scope for Reasoning, for there is no Analogy. What have Mind and Matter in common? and how from the existence of the one can we infer the other? There is here a deep gulf over which Reasoning can throw no bridge. If there be in human nature a fact original and unaccountable, it is the Mental Perception of Material objects.

SECTION THIRD.

OF THE EVIDENCE AFFORDED BY PERCEPTION.

1. Having analysed the process of Perception, having traced its origin to Touch, and determined that the faculty is original and unaccount-

able, we have still to inquire what evidence we have of the reality of the knowledge thence obtained. What proof have we that the objects which we perceive really do exist?

2. This evidence must depend upon the theory which we may adopt, with respect to the mode of communication between Mind and Matter. All the theories which have been formed, or which can be formed on this subject, fall under two general heads. Our knowledge of the Material universe is either *mediate* or *immediate*, in other words, we are either non-conscious of the existence of Matter, or conscious; our knowledge, on the former supposition, being communicated through a medium. The first is the opinion of almost all philosophers, all thinkers, ancient and modern, with one remarkable exception, that of the first Metaphysician of the present day, and perhaps of Dr. Reid, and may be one or two more, who maintain the doctrine of Immediate Perception. Since this theory is one and indivisible, and since, if true, it will save us the trouble of examining several others, we shall consider it first.

3. This theory is certainly supported by Sir William Hamilton;[f] but, whether it be held by any one else, is, I think, doubtful. In his "Discussions on Philosophy," Art. ii., Sir William stoutly

[f] *Discussions on Philosophy*, Art. ii. *Philosophy of Perception.*

maintains, in opposition to Brown, that such is the opinion of Reid, and he severely taxes Brown for mis-conceiving the tenets of the latter. But in the very valuable and acute notes to his edition of Reid's works, Sir William often expresses himself doubtfully on the point, whether Reid did in truth hold the doctrine of Immediate Perception. This is sufficient to show that the language of Reid is not free from ambiguity; so that, if Brown did mis-interpret him, he is not without excuse. The notes below will prove that Sir William himself admits the ambiguity.[8]

4. But dismissing authority, let us examine this theory on its own merits. First, what are we to understand by Immediate Perception?

5. The theory supposes that we *immediately know*, in other words, are *conscious of* external Objects; so that the evidence of their existence

[8] "Reid himself, like the philosophers in general, really holds that we do not perceive external things immediately, if he does not allow us a consciousness of the *non-ego*."—H. p. 263.

"Des Cartes and Reid coincide in doctrine, if Reid holds that we know the extended and external object only by a conception or subjective modification of the percipient mind."—H. p. 274.

"This paragraph appears to be an explicit disavowal of the doctrine of an intuitive or immediate perception."—H. p. 310.

"This statement of Reid again favours the opinion that his doctrine of perception is not really immediate."—H. p. 327.

Other notes to the same effect might be quoted, but these suffice to show that, even according to Sir William, the opinion of Reid is doubtful.

is the highest possible; the evidence of Consciousness. On this supposition, to doubt their existence is absurd; for we have seen that to doubt our Consciousness involves a contradiction. This, assuredly, is to take up an high position in defence of the material world, but can it be maintained?

6. An absurd opinion, once fairly stated, is all but refuted. We have seen that Mind and Matter are separated from each other by a gulf, broad, deep, impassable; that both indeed are Substances, or something permanent amid innumerable modifications, though their qualities are not only different, but opposed, and incompatible. We have also observed, that Consciousness is a general term for all the Mental Phenomena, and for them alone, applicable alike to Sensations, Emotions, and Thoughts; but not to Matter nor to any quality thereof. Thus we say that we are conscious of Sensation, Emotion and Thought; but to affirm that we are conscious of Extension or Solidity is a contradiction to the meaning which we had attached to the term *Consciousness*, and, therefore, absurd. Agreeably to that meaning, if we be conscious of Extension, then Extension is a mental quality, which is surely absurd. Or if Extension be allowed to be a mental quality, then, as it is certainly a bodily quality, it must be both, which is a palpable absurdity, unless mind and body be alike, or at least not very

different. This, then, is the only supposition consistent with the opinion that we *immediately know*, or in other words, are *conscious of* matter, a supposition which, by confounding matter and mind, upsets the very foundation of Metaphysics, undoes all the work begun in modern times by Des Cartes, and continued by so many others. In short, the theory of Immediate Perception leads either to absurdity or materialism; so, "choose your horn."

7. It remains for us to consider the other and almost universal opinion that the knowledge of external nature which we derive from Perception is not immediate but mediate, or, as it is sometimes called, *representative*, in opposition to the former, which is styled *presentative*; the object, in the one case, being supposed to be known through something which represents it; in the other, at once, by itself; as England is ruled by a House of Commons, an assembly of delegates, while Athens was governed by the whole body of Citizens. This opinion, however, admits of three varieties.

8. The first variety is that the medium of Communication between Mind and Matter is something called *Sensible Species*, passing from the outward object to the mind, but distinct from both, of an anbiguous nature, but commonly supposed not to be quite mental. This opinion, as we have seen, was long prevalent in the schools,

and has been attributed to Aristotle, though, as it seems, without sufficient grounds;[h] but, as it is now universally exploded, we shall not trouble our readers with a serious refutation thereof. It was evidently a mere hypothesis without proof, invented to explain, as was thought, the action of matter upon mind, by bridging over the gulf between them. The supposition of a third something, neither quite matter nor quite mind, was purely imaginary, and injurious to Philosophy, as tending to soften down the distinction between Mind and Matter.

9. The second opinion is that the medium of communication between Mind and Matter is something called an *Idea*, itself a mental phenomenon, and therefore a fit subject for consciousness, and yet distinct from the Mind, and capable of existing even independent of Consciousness. Such was the opinion of Des Cartes and his followers, of Malebranche and Berkeley; but whether it were entertained by Locke is at least doubtful.[i] Reid certainly supposes that all

[h] See on this subject Sir William Hamilton's Notes to the various Chapters on Perception, in his edition of Reid's Works.

[i] The language of Locke is so figurative and various that it is very difficult to determine what was his real opinion on this point. My own belief is that a person unacquainted with the above theory of Ideas would not detect it in Locke; but knowing, as we do, that the theory was then the prevailing one, we *may*

modern philosophers previous to himself held the opinion; though in this he may be mistaken.

10. But, 1. Where is the proof of this hypothesis? That Ideas exist even independent of consciousness is certainly incapable of proof, for by consciousness alone we know them, and along with it they seem to come and go. Even when a similar idea recurs, we have no proof that it is the same. It is not like an outward object to which we can return and find it as before. The idea vanishes, and, as far as appears, for ever. But this supposes a constant creation of Ideas, or rather of Thoughts. Why not? Is not a recurrence of the same Idea quite as incomprehensible as the creation of a new one? If the Idea were laid up, as in store, we might hope to find it again when we wish; but we know that often we cannot.

11. And 2. What necessity is there for this hypothesis? What does it explain? The con-

interpret the language of our great metaphysician in its favour; particularly as he never attempts to refute it. Of late years there has rather been a tendency to depreciate Locke, but in spite of all that has since been written, the Essay on the Human Understanding is still the great English work on Mental Philosophy, as the Wealth of Nations is on Political Economy. The prophecy of Hume has hitherto certainly not been fulfilled, that "Addison perhaps may be read when Locke shall be utterly forgotten." The style and subject of Addison are popular, but he describes manners which have changed already; while the subject of Locke, the Mind of Man, is still the same.

nection between Mind and Matter? By no means; this is quite as inexplicable as before. Is it more unaccountable that Matter should act directly on Mind, than through an Idea? In fact we have two difficulties instead of one. We have first to suppose that Matter rouses a dormant Idea, and then that the Mind becomes conscious thereof. There remains the fundamental difficulty, how the material can affect the immaterial; for surely it is as hard to suppose that Matter should rouse a sleeping Idea as stir up the Mind itself, the Idea and the Mind being both immaterial. The hypothesis then is without proof, as well as quite gratuitous, it complicates the simplicity of nature and yet explains nothing, removes no difficulty.

12. The third and most simple variety of the Representative Theory is the one which supposes that the medium of communication between us and the outward world is nothing more than a fleeting modification of mind itself, having no existence out of Consciousness. This fleeting modification we call *a* Perception, which is distinguished from Perception only in this, that the word, when used without the indefinite Article, signifies a permanent Power or Faculty from which innumerable particular and passing Perceptions are supposed to flow. But, between a Perception and a particular act of Perception there is no difference. The act, or state of mind,

—call it what you will,—is one and indivisible; being simply a modification of mind, of which we are conscious, and which dies with that consciousness.

13. For the truth of this theory, if theory it be, we can appeal confidently to experience, the experience of Consciousness, the supreme arbiter in all metaphysical questions. We maintain that the above gives a correct statement of all we know on the subject, all of which we are conscious, while other Theories are either contradictory or fanciful. The simplicity of this account ought also to plead for its adoption.

14. A correct analysis of the process of Perception is sufficient to put this truth in a very clear point of view. We have seen that Perception consists of two parts, Sensation and Perception proper, the one preceding, the other following with inconceivable rapidity, so as only to be separated by reflection. Now, were we to adopt the theory of Immediate Perception of objects, a theory, however, which by me is inconceivable, because contradictory; still, our knowledge of nature being obtained through our Sensations, that is through a medium, after all, it would not be immediate. Here then is another contradiction. And if abandoning immediate Perception we cling to Sensible Species, or to Ideas, then, as these are supposed to be the immediate object of the mind, they must come be-

tween the Sensation and the act of Perception. Thus, instead of Sensation and Perception proper, we should have Sensation, Species, or else Idea, and Perception proper; on the one supposition, that of Species, a semi-material something being interposed between two purely mental states; on the other, that of Idea, a permanent immaterial something intervening between two fleeting mental phenomena. Forced and unnatural combinations!

15. But the important question still remains undecided. If we reject the theory of Immediate Perception, if we deny that we immediately know or are conscious of external nature, on what evidence do we believe in the existence of matter.

16. The evidence of consciousness being set aside, can the existence of matter be said to be self-evident, like the axioms of geometry, such as that two lines cannot enclose a space? Certainly not. For aught we know, all appearances might be the same, supposing matter not to exist; we cannot pronounce this absurd *a priori*. Who shall limit the power of God, and say that he could not have given us such and such notions, in any way he pleased, without the creation of another world, a world of matter? In short we see *intuitively* the truth of mathematical axioms, we cannot doubt these; but we do not see *intuitively* that the notion and belief of matter necessarily imply its

existence. Why should an immaterial phenomenon suppose of necessity a material one?

17. Is, then, our belief in the external world founded on Reasoning, or can it be supported thereby? That it is not founded on reasoning, in the first instance, is clear from all that has here been said on Perception. Our belief in the world without arises from the Sensation of Touch, at a very early age, long before our reasoning powers have become developed. And wise indeed is this provision, for such belief is necessary to our preservation at every age; and had it depended on reasoning, we should have perished prematurely.

18. Neither is our belief in the outward world founded on Experience. We certainly experience certain Sensations, and we can recognise others as similar when they recur, but experience can never inform us that the cause or occasion of these Sensations is an extended solid object without the mind. Since then the existence of matter is not known by Consciousness, nor self-evident, nor learnt by Reasoning, or by Experience, it must be considered as an original or fundamental Article of Belief.[1]

19. Though not originating in reasoning, may not our belief in matter be afterwards con-

[1] The subject of Fundamental Articles of Belief is discussed in the Chapters "Of Memory," and "Of Belief."

firmed and justified thereby? That is a distinct question.... Rational grounds for believing we think that we have, and, if so, we have reasons, probable indeed, not demonstrative, indirect rather than direct, sufficient to obviate the objection that we believe without any proof, but not enough to silence all scepticism.

20. On what ground, then, can we defend our belief in matter? Simply on this, *Universal Consent.* That which all men, in all ages, at all periods of life, from infancy upwards, have believed without doubt, without hesitation, must be assumed to be true. That we take for a first Principle; and some first Principles must be granted, or we can arrive at no knowledge, except in the Science of Mathematics or Quantity, where first principles are Self-evident. All other branches of knowledge start from *data* not self-evident, which, however, must be taken as true, for otherwise, reasoning would have no Premises. The attempt to prove every thing is therefore absurd. Fundamental propositions admit of no proof, they are either self-evident or not, but since they are *first* propositions, there can be nothing *prior* whereby they may be proved. We assume then as a First or Fundamental Proposition, that "Whatever is and has been universally believed is worthy of credit." But the existence of the material world is and has been universally believed; therefore, it is worthy of credit.

21. Scepticism may be quite as great an abuse of the Understanding as Credulity. To doubt or disbelieve out of place is as much opposed to right reason as ill-founded belief. Now, as to doubt or reject all fundamental propositions not self-evident leads to universal scepticism or universal ignorance, it must be an abuse of the Understanding. Man was evidently made for decision and action, his very being depends upon them, and therefore he will and must believe something.

22. But here an objection presents itself. It may be said, and has been said, you may plead universal consent, provided it be consistent with itself and with your own theory, but not so if it be inconsistent with either. In the former case, universal consent must be rejected as a solid ground of belief,—in the other, your theory must fall. "Thus," says Hume, "do you follow the instinctive propensities of your nature in assenting to the veracity of Sense. But these lead you to believe, that the very perception or sensible image is the external object. Do you disclaim this principle in order to embrace a more rational opinion, that the Perceptions are only representations of something external? You here depart from your natural propensities and more obvious sentiments; and yet are never able to satisfy your reason, which can never find any convincing argument from experience to prove

that the Perceptions are connected with any external Object."[k]

23. Such is the objection in full, and it places us in this dilemma, either we hold fast by universal consent, and in so doing must adopt the vulgar opinion, that the "very perception, or sensible image is the external object;" or retaining the theory of representation, we must allow universal opinion to be inconsistent therewith, and only partially true. In a word, we have only to choose between Absurdity and Scepticism; for the common opinion, *as so stated*, is absurd; and, if we reject it and retain our theory, then, universal consent, being allowed false in one case, cannot be relied on in another. A pretty dilemma forsooth! Which horn shall we choose?[l]

24. But is it true that the "instincts and propensities of our nature lead us to believe that the very perception or sensible image is the external object." *There lies all the question.* This is assumed, but can it be granted? By no means: we deny it altogether. No man ever believed such a proposition. The vulgar are not professed Metaphysicians, they never read Locke, Hume, or Reid; but they know enough not to confound

[k] Hume's Essays: "Of the Academical or Sceptical Philosophy."

[l] "Pyrrhonism or Absurdity; choose your horn," says Sir William Hamilton. "Discussions on Philosophy," Art. ii.

mind with matter. In looking at any object, say a tree, their attention is fixed upon the external object, and on that alone; and in general they reflect not for a moment upon the operation going on in their own minds. Of the perception, or "sensible image," they make no account. They pass over it to reach the object, seldom dwelling enough upon the former to make it the subject of a proposition. But, wherever the mental state does occur to them, as sometimes it will, then common language clearly separates the perception from the external object. They say, all men say, "I perceive a tree," or in other words, "I have a perception of a tree," for the phrases are convertible in common language; and here the mental phenomenon, the perception, or "sensible image," as Hume calls it, is expressly distinguished from the material object, the tree. We also say, "let me see such a thing," or, "let me have a sight of it," where again, the sight, which is mental, is clearly distinguished from the material thing. It is, therefore, altogether untrue, that "The instincts and propensities of our nature lead us to believe that the very perception or sensible image is the external object," and, consequently, the objection founded thereon falls to the ground. We are not then reduced to the dilemma above stated; we need neither adopt this absurdity, nor, by allowing that those instincts and propensities give us the lie in one particular, deprive them of all credit in

another. The evidence of those instincts and propensities becomes agreeable to reason, and consistent with itself; it justifies our belief in the outward world, and confirms the representative theory.

25. Universal consent being allowed true to itself, as well as consistent with the only rational theory of Perception, it may still be objected, that universal consent is but a poor foundation for knowledge, *blind* universal consent, at least, like that in the existence of matter, which is not a self-evident truth, nor established by reasoning, or by experience. Where universal consent depends upon the exercise of our Reason, as in the case of Belief in a God or Gods, there it will be allowed to be a good ground for conviction; for what appears rational to all men, at all times, and in all countries, can hardly be supposed untrue, without depreciating Reason altogether. But, when Belief is a mere instinct, why should we trust it? Practically, this belief may be useful, nay, necessary to our preservation; but, for all that, may it not be a deception, a salutary deception no doubt, a beneficent cheat, a trick of nature, more solicitous for our safety than for the accuracy of our speculative knowledge?

26. To this we answer that belief, in general, founded on "the instincts and propensities of our nature," is justified, as far as it can be, by subsequent Experience, and, therefore, the particular

belief now in question. We see no reason to suppose that the present state of things is one vast cheat. On the contrary, we find by experience that we can rely upon the course of nature, that, generally speaking, we can so far foresee events as to direct our actions towards the attainment of certain ends with a fair prospect of success; that one line of conduct may be predicted to terminate in ruin, another in triumph; in short, that we are Nature's children, not her fools. We have then no reason to suppose that any universal original belief is fallacious, in particular, our belief in the material world; on the contrary, we have strong reason to believe them true. Experience is decidedly in favour of the truthfulness of Nature. It strongly repels the supposition that the material world is but a pageant, unsubstantial as the vision of Prospero.

27. But to say that the Belief in question is *Universal*, is to put the case too feebly, for this Belief is not only Universal, but *irresistible*, an essential part of our mental being, of which no one, not even the greatest Sceptic, can divest himself. It clings to us from infancy to age with unfailing pertinacity, and those who dispute it, dispute against their own conviction. To deny in words what no one can doubt in reality, must surely be intellectual perversity. It is in fact to belie our nature. Nor is this the only instance of Belief at once universal and irresistible. It is

one, but only one of the fundamental articles of our creed, of which the criteria or tests will be given under the head of Memory. Now we cannot reject one of these Articles and retain the rest. If we give up Matter, we must also abandon our Belief of uniformity in the Constitution and Course of Nature, our Trust in Memory; nay, our Personal Identity, for all these rest on the same foundation. Then we shall doubt of every thing, except the present Sensation, Emotion, or Thought; the very doubting of which implies contradiction; and we shall approach the *absolute* goal, the final discovery of Hegel and Oken, the consummation of all Philosophy, *Nothing:*

"And Naught
Is ev'ry thing, and ev'ry thing is Naught!"

28. With the following observations relative to the Sensitive part of the process in Perception, we conclude the present subject. Observe, first, that Sir William Hamilton, in his doctrine of *Immediate Perception*, entirely overlooks *Sensation;* for how can the perception of outward objects be immediate, if a sensation intervene between the external object and our knowledge thereof? Observe, secondly, that pure Idealism, as well as all Scepticism about the existence of the material world, may be traced to the neglect of *Sensation*, as antecedent to Perception proper. The Sensation, being in itself unimportant, in the

case of the primary qualities of matter, is apt to be over-looked. Hence pure Idealism. But, allowing the Sensation, the question then arises whence comes it? from the mind itself? does the mind then create Sensation of itself? if not, it must come from something else; *i.e.* from the non-mental and material.[m] Observe, thirdly, as the neglect of Sensation has given rise to Idealism, so too great attention to Sensation has produced Sensationalism, and the doctrine of Condillac. All mental phenomena depend, *originally*, on Sensation; but, for all that, all mental phenomena are not Sensations. Sensation rouses the dormant faculties of the mind, which without it might have slumbered for ever, and it is therefore the *occasion* of them all, that is, an *aiding* cause, essential, though not principal, and yet the only original cause which we can trace. There is, then, but one assignable origin of our ideas, namely, Sensation, not two, as Locke supposes, for those opera-

[m] The only other possible supposition is, that Sensation in us, in all men, nay, in all animals, is caused by an Omnipresent Mind, that is by Deity. It was this view of the case, no doubt, that led Berkeley to believe that in annihilating matter he levelled Atheism. Sensation is a fact that must have a cause, material or immaterial; and, therefore, the former being removed, the latter remains; and as the cause, like the effect, must be every where present, that Cause is God. Berkeley did not deny that the universal and irresistible belief of mankind was worthy of credit; but he boldly asserted that the vulgar did not believe in matter, —that it was an invention of philosophers!

tions of the mind which form the subject for Reflection, and, hence, Reflection itself, depend so much upon Sensation that without it they would never have been. But the ideas of Reflection of Locke prove that he was no Sensationalist, that he held that we have Ideas very different from Sensations; and that alone is important. This being allowed, the question—whether or not Reflection should be considered a Second Source of our Ideas, is of less consequence. It can scarcely be an original and independent source, because, those operations of the mind on which we are supposed to reflect must be prior to Reflection, and those very operations, which might more properly be considered as a source, are themselves originally dependant on Sensation, though widely different from it, as an Effect often differs altogether from its Cause. The mind once roused by Sensation, afterwards rises high above it, and soars into regions, far, far removed from the low and vulgar *occasion* of its first development.

29. With one observation more, we close the present Chapter. Since all Perception supposes that some object or objects are within the range of our senses, and that some impression is actually made upon the material organ by the object, either immediately, or mediately, therefore, all Perceptions are of things particular and really existing. There is no general, no abstract Perception. This, again, shews us that, in the order of mental de-

velopment, Perception is the earliest power of Thought.

SUPPLEMENT TO CHAPTER THIRD.

OF PERCEPTION.

Since the above chapter was written, I have made up my mind, chiefly from reading Locke's Posthumous work—"An examination of Père Malebranche's opinion of seeing all things in God," that our great Metaphysician did not entertain the Ideal Theory, properly so called, the theory which supposes Ideas to be something immaterial, yet distinct from the mind, and continuing to exist, even out of our Consciousness. To this theory, held by Des Cartes and others after him, Malebranche and Berkeley added something of their own, namely, that these Ideas, when not present to our minds, exist in the Mind of the Deity. This opinion was common to Malebranche and Berkeley, though they differed in this, that the former supposed that we saw the Ideas of outward material objects in God, while the latter maintained that there were no outward material objects, and that Ideas were not seen in God, but were suggested by God. From the opinion of Malebranche, who denied that we could see material objects directly, to that of Berkeley, who denied that there were any such objects to see,

there was but one, and an easy, step. Now, that Locke held the Ideal Theory, under any of these modifications, I utterly disbelieve; and I think that the above tract establishes the point. I am, indeed, aware that a highly-gifted metaphysician, of the present day, has deduced from one passage of that work a conclusion diametrically opposed to mine, but, as I humbly think, erroneously. In Sir William Hamilton's "Discussions on Philosophy," Art. ii., a quotation is made from the "Examination," to show that Locke would not allow a Sensation to be a *modification of our Soul* as Malebranche called it; "and if," argues Sir William, "Locke ridicules *even* the opinion which merely reduces the secondary qualities to mental states, *a fortiori*, and this *on the principles of his own philosophy*, must he be held to reject the doctrine which would reduce, not only the non-resembling sensations of the secondary, but even the resembling, and consequently, extended ideas of the primary qualities of matter, to modifications of the immaterial unextended mind." All I can say is, that such is not Locke's own inference; and if my much esteemed and now deeply lamented friend had extended his quotation, only to one sentence more, he would have seen that the conclusion drawn by Locke is quite different. Locke is arguing, and no doubt erroneously, against Malebranche's distinction between *Sentiment* (Sensation) and Idea in Perception, a

distinction in accordance with our own between *Sensation* and *Conception;* and he attempts to confound the two, and instead of saying that if Sensation be not a Modification of the Soul much less is an Idea on the contrary he argues, if a Sensation be a Modification of our Soul, so likewise must be an Idea. Either both are modifications, or neither; in this respect they are alike. The concluding sentences of the section which prove this are the following:—"But let it *(modification)* signify what it will, when I recollect the figure of one of the leaves of a violet, is not that a new Modification of my Soul as when I think of its purple colour? Does my mind do or suffer nothing a-new when I see that figure in God?" (Sec. 39). And the same strain of argument is repeated in Sec. 48., the object of which is to confound the distinction between Sensation and Idea, and to show that if the former be a Modification of the Soul, so is the latter, and, consequently, if we have not the Sensation of material things in God, as Malebranche allows, neither do we see Ideas in God. This, then, affords no evidence of Locke's belief in the Ideal Theory, nay, rather a proof of the contrary; for, as no one ever maintained that Sensations had an existence out of Consciousness, Locke, by assimilating Ideas and Sensations, showed that he did not hold the separate and permanent existence of the former. Another and more direct proof of the same is afforded by Sec. 17

of the same "Examination," where Locke prints in italics, evidently as a startling proposition, the opinion of Malebranche, who considered it as an absurdity to think that Ideas are *annihilated when they are not present to the mind.*

The following passage affords a strong proof that Locke did not hold the Ideal Theory. "One who thinks Ideas are nothing but perceptions of the mind annexed to certain motions of the body by the will of God, who ordered such perceptions always to accompany such motions, though we know not how they are produced, does in effect conceive those Ideas or Perceptions to be only Passions of the Mind when produced in it, whether we will or no, by external objects. But he conceives them to be a mixture of Action and Passion when the mind attends to them or revives them in the Memory." Sect. 15. Now, I would ask, could one who held the Ideal Theory use such language? Could he call Ideas Perceptions? Could he call them Passions of the Mind? According to that theory an Idea is not a Perception, but the immediate object of the mind in the act of Perception; still less, on the same theory, could an Idea be called a Passion of the Mind.

CHAPTER IV.

OF CONCEPTION.

SECTION FIRST.

OF CONCEPTION IN GENERAL

1. In the preceding Chapter we unavoidably touched upon Conception; inasmuch as Conception is comprised in every act of Perception. We shall not, therefore, recur to what has been said on that point; but, observing that all Conceptions are either *Original* or *Derivative*, we shall in this Chapter treat chiefly of the latter; though whatever may be said of Conception in general must be applicable to both. Original Conceptions are those comprehended under Perception, while all others are Derivative, because they are derived from the former. No doubt these words imply a Theory, for the truth of which we must refer to the last Section of this Chapter.

2. Conception, then, in the widest sense admissible, means that Mental Power whereby we obtain the thought of things separate, or apart, as much as possible, from any relation with anything

else. Thus, single words, or words equivalent to one, correspond to Conceptions or Notions (for these terms we use as perfectly synonymous); such as man, tree, house, mountain, substance, time, space. No doubt, Conceptions and Relations are generally mixed up together in those compound states of mind of which we are conscious. But it is the business of the Metaphysician to analyse and examine separately what is really united; just as it becomes the Chemist to analyse common salt into Chlorine and Sodium, and treat of each apart, though neither is often found by itself. Now Relative Thoughts cannot exist without Conceptions, for if we see a Relation it must be between two things at least of which we have Conceptions; but Conceptions may, without contradiction, be supposed to arise without the Thought of Relation. Consequently, non-relative Thoughts or Conceptions ought to be treated of before the Relative.

3. We must then be careful not to confound Conception with *Comprehension*, as Reid has done,[a] to the darkening of this subject; for Comprehension implies Relation. But Comprehension is not Judgment, for it may exist without any decision as to Truth or Untruth, without either Belief or Disbelief. Thus, when I read for the first time the enunciations of the propositions

[a] See Reid's "Intellectual Powers," Essay IV., Chapter iii.

of Euclid, for instance, that of the fifth of the first book—that the angles at the base of an isosceles triangle are equal, I perfectly comprehend the statement, though I can pass no judgment upon it before I have gone through the proof. Thus is Comprehension distinguished from Judgment, as also from Conception, which is non-relative. We may therefore say with propriety that we comprehend the enunciation of any relation, but not that we conceive it. We shall afterwards find that this distinction is important in fixing the criterion of truth.

4. All propositions affirm or deny that some Relation exists between two things; propositions must therefore be either true or false; but Conceptions affirm or deny nothing, and therefore they cannot be pronounced false or true. Distinct or confused they may be, clear or obscure, lively or dull, adequate or inadequate, real or imaginative, but to predicate truth or falsehood of them is contradictory, and therefore illogical.

5. Neither does Conception necessarily imply that there is any object in nature corresponding to it; for we can form Conceptions of monsters, such as Centaurs, mermaids, griffins, winged bulls and lions, etc., which have no real existence. One kind of Conceptions alone has always some real material object, namely, those which we have called *Original*, that form an element of Perception. Nothing is so free as Conception, it can

create new worlds, and people them with new beings, with almost unlimited diversity.

6. Conceptions are expressed by Names, as Relations by Propositions; so that whatever division we may make of Conceptions, the same will hold good of Names. But Conceptions properly belong to Metaphysics, or pure Mental Philosophy; Names to Logic. These two sciences must not be confounded.

SECTION SECOND.

DIVISION OF CONCEPTIONS.

1.—OF PARTICULAR CONCEPTIONS.

1. Our primary division shall be into Particular and General Notions or Conceptions. The first, as the name implies, represent Individuals, the second Universals, or something common to many Individuals, such as the notions attached to man, quadruped, river, mountain. All the Conceptions involved in Perception, as we have observed, are Particular; and so are the Copies, as they may be called, of those original Conceptions, or the notions of Individuals formerly perceived. But we must remember that all Conceptions are in themselves Individual, and that it is only in reference to their objects that some

are called Particular, others General. A General Notion is in itself as much Individual as a Particular one.

2. Particular Conceptions cannot be subdivided into Simple and Complex, for all Particular Conceptions are Complex. In nature all is composite; analysis and decomposition into elements are the work of man. Our own bodies, the air we breathe, the water we drink, the animals and vegetables we eat, nay, almost all minerals, are compounds; but even when simple, our notions of them are manifold. Our notion of gold, for instance, comprises many particulars,—colour, weight, ductility, indestructibility, value, etc. It is therefore inaccurate to say with Locke, that Complex Ideas are formed in the mind by the union of Simple ones; for the reverse is the truth. Compound Notions first arise, and are analysed afterwards.

3. But Particular Conceptions can be otherwise divided into the *Real*, and the *Imaginative*, meaning by the former those notions which have real archetypes, as they have been called, in nature, that is real objects, either actually or formerly perceived; by the latter, those which either have no such archetypes, as the notions of "Gorgons, and Hydras, and Chimæras dire," the Lilliputians, the Brobdingnags, the Houyhnhnyms, the Yahoos of Swift; or none ever perceived by the individual, though they do exist. The mental

power by which such notions are framed is properly called *the Imagination*, and it is a species or variety of Conception. Where the objects have no real existence in nature, they are said to be Imaginary, and the notion of them must be Imaginative; but, are the notions of things which really exist, though they have never been perceived by the individual, also to be classed as Imaginative?

4. Here it seems desirable to enter more into the nature of Imagination, to fix what is proper to it, and to show how it differs from Fancy, with which it is apt to be confounded. To judge from the etymology of the word we may suppose that originally Imagination was limited to the power of conceiving visible objects, to the power of Visual Conception, as we may call it, for none but visible objects present to the mind anything like an *Imago* or Image. But, in course of time, this original signification received two modifications, the one a limitation, the other an extension. Visible objects, when actually present and perceived, are now never said to be *imagined*, but *seen*; and some Conceptions other than visual are said to be the work of Imagination. Nay more, when visible objects, no longer present and perceived, are conceived in their absence just as they were formerly seen, no exercise of Imagination is supposed. But, when visible objects, never before seen by the individual, are pre-

sented to his mind as if they had once actually been seen, whether such objects really exist in nature or not, then Imagination is said to be at work. Thus, to me who have never seen the Acropolis of Athens, or the Pyramids of Egypt, it requires an effort of Imagination to picture them in my mind, as well as to conceive fabulous and unnatural animals, fairy scenes, and palaces of enchantment; a less effort, perhaps, in the one case than in the other, but of the same sort; while to conceive Mont Blanc or the Blümlis Alp demands no such effort, for I have seen them. The existence or non-existence of the object is clearly immaterial, so far as the nature of the mental effort is concerned, provided I have not seen it or something very like it; for what is it to me whether the Shield of Achilles, the Palace of the Sun, or the Gardens of Armida, ever really existed or not? On either supposition must I not *imagine* them?

Moreover, Imagination is not limited to Visual Conceptions, for new combinations of Sound in music are universally attributed to this faculty; and we can even imagine, though in a far less degree, tastes and smells somewhat different from those which we have actually experienced. In like manner, the Dramatist, the Poet, and the Novelist, imagine Emotions similar, no doubt, to such as they have felt, but considerably modified, especially in intensity. Thus, upon the

whole, Imagination is that Faculty whereby we form Conceptions of outward objects *which we have never perceived*, or of Sensations and Emotions *which we have never felt*. Fancy, on the other hand, is the Faculty whereby we discover *new Relations*, especially relations of resemblance, between things. Imagination, then, is concerned with new Conceptions, Fancy with new Relations. This seems to be the fundamental distinction. Remark only that Relations of Fancy must be new, striking, unexpected, between things which really differ widely. Thus, Fancy is the very soul of both Poetry and Wit. In the one case, the resemblances are sublime and beautiful; in the other ludicrous.

5. It is clear that all the Conceptions comprised in Perception are real; but all real Conceptions are not included in Perception; for the notions of things formerly perceived are also real. Consequently real Notions are of two kinds; the *Original* and the *Derivative*.

6. Thus, starting from the division of Conceptions into Particular and General, and subdividing the Particular into Real and Imaginative, we arrive at the Original and Derivative as a further sub-division of the former; while, in the opening of this Chapter, we mentioned that all Conceptions might be divided in the first instance into Original and Derivative. These, then, are two Classifications quite distinct, and we might

have carried out either; but we prefer the one on which we are now engaged, partly because it does not imply any theory at the outset, partly because it seems more natural; for, on the other system, many of our particular conceptions must be arranged along with general conceptions, under the head of Derivative, though they widely differ, and separated from other particular conceptions which they closely resemble. The notion of a tree, as perceived, is surely very like to the notion of the same tree no longer present to the senses; yet, on the other system, they must be classed apart; and though this latter conception is very different from the abstract conceptions of Substance, Time and Space, yet, as Derivative, they must be arranged together. That system, then, is less natural than the one we have adopted. It is scarcely necessary to add that all Imaginative Conceptions must be *Derivative.*

7. Another division of Particular Conceptions may be into *Visual* Conceptions or Conceptions of Sight, whether Original or Derivative, and the *Non-visual.*

We have seen that at first Conceptions of Sight, and these alone, were attributed to the Imagination,[e] and though the sense of this word has

[e] "Imagination, when it is distinguished from Conception, seems to me to signify one species of Conception, to wit the Conception of Visible Objects." Reid's Intellectual Powers. Essay IV. Chap. i. This was, I believe, the original meaning of Imagination.

since been modified, yet it remains true that to the Conceptions derived from Sight, and to them alone, whether the Objects be actually seen or only recalled the word Image is at all applicable. Of course the language is still metaphorical, derived from the image of an object in a glass or in clear water. but there is an analogy between this and the mental representation of visible objects, an analogy of which every one is conscious. And as this analogy is shared by no other mental representation, it serves to distinguish the Conception of Visible objects, or Visual Conceptions, from all others.

8. Visual Conceptions may be considered as the grand source of amusement and cheerfulness. To the great mass of mankind, who are little addicted to scientific and abstruse pursuits, Visual Conceptions are the chief intellectual delight; and to all, without exception, they are a grand resource against vacancy on the one hand, and too concentrated thought on the other. Is not light universally considered cheerful, and darkness gloomy? and why? surely because the one gives us a perpetual succession of lively Conceptions, the other none. Hence a principal delight of travelling, riding, driving, walking, especially through a new country, which affords us fresh and ever changing conceptions. Hence the delight of the multitude in shows of all kinds, even in funeral pomp, and the taste now manifested universally for illustrated books and newspapers. If children, as Rousseau says, are led

by the mouth, children of a larger growth are led by the eye. But to none are Visual Conceptions more valuable than to men of deep research, who, but for the recreation of the eye and of conceptions borrowed from the eye, might lose their intellects from over-exertion. No books are more generally relished than books of travels; but these owe most of their charm to the images which they suggest. Thus, whether we consider the Original or the Derivative Conceptions of Sight, we shall find that much of our cheerfulness, nay, much of our mental health, depends upon them. It has indeed been remarked that the blind are more cheerful in society than the deaf. This is natural enough; for blindness is not nearly so great an evil in society as deafness. But, follow the blind man home especially to a solitary home, and think you that he will not be found more dull than the deaf? Deafness is scarcely any evil in solitude, but blindness is a perpetual blank. Still, if a man ever did see, he can always delight his mind with colours and forms no longer visible, or call up new forms and new modifications of colour by means of Imagination. Thus, the images of Sight, whether Original or Derived, are particularly important among our Conceptions, because they fill up so well the capacity of the mind. They supply vacancy, or divert from other and engrossing thoughts. And they are almost always in our power, for we have only to open our eyes and be filled: or, even in

absence, or in the dark, we can wander mentally through regions of beauty or sublimity. "The Alps, the Appennines, the Pyrenean, and the river Po," the isles of Greece, the heights of Olympus, rise up like magic before us.

9. Visual Conceptions may be divided into the *Original* and the *Derivative*, the former being those Conceptions comprised in Visual Perception, the latter derived from the former, and arising without the actual presence of any outward object. Of course, Original Visual Conceptions are all real; but Derivative Visual Conceptions may either be *real* or *imaginative*; for the images of visible objects may recur to us just as they were at first, or else variously modified by Imagination.

10. Particular Conceptions are in number infinite, diversified without end. When in motion, our Visual Conceptions comprised in Perception vary at every step we take; and when we rest with closed eyes, we can call up similar Conceptions, and even diversify them by Imagination without limit. The mind is particularly rich in visual notions, and can recal with peculiar fidelity the images of things formerly seen.

> Segnius irritant animos demissa per aurem,
> Quam quæ sunt oculis subjecta fidelibus.

11. Since Particular Conceptions are innumerable, their objects must also for the most

part be without names. Though every man has a name, yet to every one the vast mass of mankind is as if nameless; few animals have individual names, and but few places. Countries, provinces, parishes, towns, and villages have names; but has each house, each field, each hedge, each individual tree and bush a name? And what are they in number as compared with the various and ever-changing images arising from groups of these, as present to the mind in Perception, or simply in Conception? Who could give names to all the visual notions which arise even during a short walk?

12. Lastly, Particular Conceptions cannot be defined, for a definition sets forth a common nature, that is something common to many individuals whereby they are distinguished from others. Thus, when I define a triangle to be a figure with three sides and three angles, I distinguish it, in the first instance, as a figure, from every thing that is not figured; and next, as having three sides and three angles, I separate it from all other figures having a different number of sides, and angles. Consequently, figure, three sides, and three angles, constitute a common nature, the common nature of triangles, and to determine this is the object of definition. But an Individual has no common nature, the supposition thereof is inconsistent with the notion of individual, and therefore a definition in this case is absurd.

13. Though Individuals cannot be defined, they may be pointed out so as to be known, either directly, by name when they have one, or by showing; or indirectly, by various circumstances connected with them. Thus, though I cannot define a *view*, I can conduct my friend to the spot and then point it out, or I can mention the spot, and tell him to go there alone. In either of these ways I can give my friend a perfect Conception of the prospect, whereas every attempt at description must have been lamentably incomplete.

14. Thus it appears that Particular Conceptions or Notions are innumerable, un-nameable for the most part, and indefinable.

II.—OF GENERAL CONCEPTIONS.

1.—NATURE OF GENERAL CONCEPTIONS.

15. One word before we proceed further on the use of the term CONCEPTION. It has been proposed by some, in particular by Sir William Hamilton, to limit the sense of the word to *General* Notions only; and a great authority is appealed to, that of Leibnitz, who distinguishes *symbolical* from *intuitive* knowledge, the former being "limited to the thought of what cannot be represented in the imagination, as the thought suggested by a general term." This, we are told,

"is the sense in which *Conceptio* and *Conceptus* have been usually and correctly employed. Mr. Stewart, on the other hand, arbitrarily limits Conception to the reproduction, in imagination, of an object of sense as actually perceived;" [f] that is, to one order of what we call Particular Conceptions. Thus, while one author excludes Particular Conceptions, and another excludes General Conceptions from his use of the word, we comprehend both; not only because we think that common language justifies this employment of the term, but also because Particular and General Conceptions have something in common, which requires a common name, and if we reject Conception, we must adopt another. We might take up *Notion*, but as this is usually employed as synonymous with Conception, we should create confusion by attempting to distinguish them. Dr. Brown adopts the word *Suggestion*, or rather *Simple Suggestion*, in opposition to *Relative Suggestion*; but, thus employed, Suggestion is synonymous with Thought, and in no way preferable. Upon the whole, I can see no good reason why Conception should not be used as it is here, distinguishing the different species thereof by the words *Particular* and *General*. Conception, thus understood, certainly constitutes a natural *genus*, and I know of no better word to mark the same. The two *species* seem to correspond with the *Intui-*

[f] See Sir William Hamilton's Reid, p. 360, note.

tive and the *Symbolical* thoughts of Leibnitz, the *φάνταϭματα* and the *νόηματα* of the Greeks, the *Anschaungen* and the *Begriffe* of the Germans.

16. After these observations on Names, we have next to inquire in what sense any Conceptions can be called *General.* All the works of God, every thing in nature is Particular, how, then, can we have General Conceptions?

17. From the above it is clear that, *in themselves,* General Conceptions are particular as much as those especially so called; as Mental Phenomena, Phenomena of which we are conscious, they are and must be particular. That the Conception which I actually experience should be the very same as that of which others are conscious is absurd, for it supposes that my mind and their's is identical, which is a contradiction.

18. When we talk then of a General Conception, do we mean that it is general inasmuch as many individuals participate in similar Conceptions? This cannot be the meaning, for, in this sense, Particular Conceptions, being shared by many, may also be general. Any prospect, being under the eyes of a crowd of people at one time, is general or common to all.

19. Since then General cannot refer to the Conceptions in themselves, it must relate to the Object of Conception, to the thing conceived, whatever that may be. In Particular Conceptions, the thing conceived is some particular object, as a

house, a tree, a hill; while in General Conceptions the object is something general. But we have seen that every thing in nature, every thing really existing is Particular, how then can there be General objects?

20. The answer is, that General objects do not really exist, any more than mathematical points, lines and figures; they are fictitious entities, which can be conceived, though they exist not. Thus, though the Conception itself be real, the object thereof is not. The proper name for these fictitious entities is UNIVERSALS. In the old philosophy, that of the Greeks, the term for these was IDEA. In modern philosophy, the word Idea has been used in other senses: but originally it meant the same as Universal.

21. With respect to the nature of Universals, many, long, and bitter have been the disputes. The opinions on this subject may be classed under three heads, two extremes, and one the mean; and accordingly we have Realists, Nominalists, and Conceptualists.

22. Plato and his followers, who were Realists, *par excellence*, maintained that all the particular objects around us are changeable and fluctuating perpetually, and, consequently, that these could afford no foundation for real Science; but they held that above them are objects permanent and immutable amid all the changes of sensible objects; and, therefore, alone worthy of the attention of

Philosophers. These are *Ideas* or *Universals*, which existed in the mind of the Deity before any individual was created, and were the models or patterns according to which all particular things were made; which now exist entire, without separation or division in every individual of a species; and which, though hidden from sense, may be contemplated by the human intellect.

23. Such is the Realistic Theory in the extreme, and though, when understood literally, it is too absurd to deserve refutation, yet, figuratively taken, it well represents the truth. It is quite true that individuals change or perish; while general laws are constant; and it is also true that Science has to do with generals not with particulars, which are useful only as the means of arriving at general results. It is also rational to suppose that the conception of all things must have been present to the mind of the Deity before he actually created them, just as every man has a plan in his head before he undertakes any work. This plan then is an object of Intellect, not an object of Sense. And, whatever is common to a Species must exist entire in every individual of that species. Thus, the Realistic Theory of Plato, interpreted figuratively, exactly describes the truth. There was but one error, that of supposing that Ideas or Universals had a real existence. May we express a doubt whether Plato actually understood his own theory in the literal sense? It would require a more intimate acquaint-

ance with the works of that sage than I can boast to give a decisive answer to this question.

24. As an instance of the opposite extreme, we may take the opinion of Hobbes, who maintains that Universals are Names and nothing more. Thus, in his "Human Nature," he says, "It is plain, therefore, that there is nothing Universal but names."[g] And again in the Leviathan, "There being nothing in the world universal but names; for the things named are every one of them individual and singular. One universal name is imposed on many things, for their similitude in some quality, or other accident; and whereas a proper Name bringeth to mind one thing only, Universals recal any of those many."[h]

25. The above may be taken as specimens of the Realist and Nominalist opinions in the extreme; but between them lies another which is called Conceptualism. The Conceptualist believes not that there are in nature real entities corresponding to General Conceptions; nor yet will he allow that there is nothing general but Names. He maintains that Names without Conceptions attached to them are a contradiction, that a Name must have meaning of some kind, or it is a mere senseless combination of letters, as *paufory;* that there may be disputes as to what is implied by a word, but

[g] "Human Nature," Chap. v. Sec. 6.

[h] "Leviathan," Part I. Chap. iv.

no question whether it implies anything. General Names, then, must have some general meaning attached to them, and as names stand not for propositions, that meaning must designate some object without expressing Relation with another object, that is, it must be a Notion or Conception of something. If, then, the name be rightly called *general* because it brings to mind many things, surely the Conception suggested by the Name, and through which alone the things can be brought to mind, ought also to be called *general.* General Names, then, suppose General Conceptions.

26. But Conceptions suppose an object conceived, real or unreal. Thus, Particular Conceptions have always some particular object, either really existing, or supposed capable of really existing, by itself, either some man, house, or tree, or an animal with the head of a man, the body of a lion, and the wings of an eagle, such as the sculptors of ancient Nineveh delighted in. Such, however, cannot be the objects of General Conceptions; for how can the Individual be the object of the General? This is a contradiction. No doubt a General Conception *may* suggest an Individual man, house, or tree, and from association it often does: but this is not the object of the General Conception. Association runs away with our thoughts even against our will, so that while discoursing of men in general, the image of John or James may rise up before me, but I should not

therefore suppose that these Individuals were the subject of my speech or writing. The image of the individual is known to be a merely accidental visitor, rather interrupting than furthering the purpose I have in view. It is on what is common to all men that my mind is or ought to be fixed, if I discourse to any advantage; that is, on the UNIVERSAL, which, though *founded* on natural resemblances, and *derived* from an examination of nature more or less accurate, has itself no real independent existence. It is, then, a fictitious entity, fictitious but not arbitrary, for here the unreal is founded on the real.

27. A General Conception, then, is that which has for its object an Universal; and if a Name may be called General because it suggests many things, as all allow, a Conception is entitled to the same epithet because it looks to many.

28. The Conceptualists, then, agree with the Realists in maintaining that General Conceptions have General Objects called Universals, but they differ from them as to the nature of these Universals; the Realists maintaining that Universals are real things, while the Conceptualists affirm that they are fictitious, the creatures of man's intellect, though derived not arbitrarily from nature and reality. On the other hand, the Conceptualists agree with the Nominalists in discarding Universals as real natures; but they disagree with them in maintaining that Conceptions are

general, quite as much as Names, and in a like sense; and also, that Universals, though fictitious entities, may be the objects of human thought, nay, that they alone are the proper subject of Science.

29. Though the opinions of the Realists and Nominalists be both absurd, yet it is not difficult to account for them, to shew on what foundation of truth they were built. The Realists were certainly right in supposing that our General Notions are FOUNDED on reality, or DERIVED from real distinctions; but they erroneously thought that the points of resemblance between things can have an independent existence. So the Nominalists were justified in rejecting such independent existence; but they were wrong in supposing, that if there were no General Thing really existing there could be no General Notion, that is, no Notion of something common to many things, cognizable by the intellect, though not really separable from the things particular.

30. And this error of the Nominalists was owing in a great degree to a mis-apprehension of the term Notion or Conception, especially to the want of a due appreciation of the difference between Particular and General Conceptions. They supposed that a General Conception must have all the properties of one that is Particular, nay, of a Visual Conception; that the thing to which it corresponds ought to be represented by

an image, like any individual object of sight; and because this is impossible, because we cannot picture to ourselves a triangle "neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but all and none of these at once,"[1] therefore they maintained that there could be no General Conceptions. And much wit was employed, especially in the Memoirs of Martinus Scriblerus, to show the absurdity of this universal triangle, a figure made up of inconsistent parts. Being asked by his father if he could not frame the idea of an Universal Lord Mayor, Martin affirmed "that he had great difficulty to abstract a lord mayor from his fur gown and gold chain; nay, that the horse he saw the lord mayor ride upon not a little disturbed his Imagination. On the other hand, Crambe, to show himself of a more penetrating genius, swore that he could frame a Conception of a lord mayor, not only without his horse, gown, and gold chain, but even without stature, feature, colour, hands, head, feet, or body, which he supposed was the abstract of a lord mayor."[f]

31. This witty description is enough to show what a General Conception was supposed to be, namely, the mental image of something invisible;

[1] Locke; "Essay concerning Human Understanding," Book IV., Chap. vii., Sect. 9.

[f] "Memoirs of Martinus Scriblerus," Chap VII.

and as there can be no such Conception, as the very supposition thereof is absurd; no wonder that General Conceptions were exploded altogether. Such is the real secret of Nominalism. It sought in General Conceptions what cannot be found in them, and therefore supposed that there is nothing general but Names. But we have already shown that Names without Conceptions are nothing, a mere bundle of letters, and not words,—that hence Names must have meaning, and if they have meaning, they must suggest General Conceptions.

32. Many, I have no doubt, who have been called Nominalists, had the term *conception* been clearly explained, would have declared themselves Conceptualists. But the system of Hume seems utterly inconsistent with general notions; and by him accordingly they were exploded, though he could not write a sentence without experiencing them. According to that philosopher, all Ideas are derived from Impressions, of which those are merely Copies, differing from the originals only in force and vivacity. Now, as no Impressions can be shown to which general Notions or Ideas correspond, the inference is that these are a mere fiction. Thus all our abstract notions vanish like a dream; Space, Time, Substance, Mind, all disappear at once. But common sense ought to have taught the Philosopher that we have such notions, or the words would be empty sounds, and therefore that the system inconsistent

with their existence must be false. All Ideas or notions are not copies of impressions, though some are, namely, particular notions; but general notions and relative thoughts arise in the mind on contemplating objects without any previous impression, of which, in any sense, they can be called the copies. This indeed was allowed by Hume, and hence the existence of such notions was denied, the last resource of a faulty theory.

2.—SUBDIVISION OF GENERAL CONCEPTIONS.

33. General Conceptions, though all alike in certain respects now explained, must differ in others, and consequently they are of different sorts. First, they are either *Abstract* or *Concrete*; in the language of Locke, either *Modes*, or *Notions of Substances.*

34. General Abstract Notions, or Modes, are notions of such things as cannot exist by themselves, even in the case of particulars, while General Concrete Notions are notions of such things as have an independent existence in particular instances, namely, substances.

35. Modes, again, are either Modes of Substances, in other words, notions of their qualities; or else Modes of Quantity, and so independent of Substance, as the notions of time, space, and number. And as the differences in qualities are indefinite, or indeterminate, but in quantity definite

or determinate, therefore the Modes of Substances may be called indefinite, those of Quantity definite modes.

36. Lastly, Modes of Substances, or indefinite modes, are notions either of mental or of bodily qualities: while Modes of Quantity or definite modes, are, as we have seen, notions of time, space, or number.[k]

37. Moreover, General Concrete Notions, or notions of substances, comprehend the notions of substance in general, of the two kinds, Mind and Matter, and of all the species of material substances, in the mineral, vegetable, and animal kingdoms. All these exist in particular instances, of themselves, without any necessary dependance on anything else. They are thus essentially distinguished from the objects of general abstract notions or modes, which have nothing in nature corresponding to them, no real and independent existence, even in particular instances. The qualities of Mind and Matter necessarily depend on their Substances and cannot exist alone; while Time, Space, and Number, if allowed to exist, have certainly no *real* existence.

38. The notions of Substances are always Complex, often comprehending a great number of

[k] It will be observed that the word *Mode* is rather ambiguous, inasmuch as it might refer either to the mind conceiving, or to the object conceived; but it is here used in the former sense only, as a short and convenient term for *General Abstract Notion.*

points, sometimes more, sometimes less, according to the knowledge of the individual; but general abstract notions, or modes, may be either Simple or Complex. First, Definite modes, or notions of Quantity, may be either Simple or Complex, as Space, a Hexagon; Time, a year; One, a thousand; and so may Indefinite modes or notions of Qualities. Thus the qualities of Extension, Solidity or Impenetrability, Mobility, Fluidity, Simple Colours, Tastes, and Smells, are Simple; and so are the notions corresponding to them; while the notions of the virtues and vices, and of many emotions, such as Love and Gratitude, as well as of all actions in which Mind and Body concur, as Murder, Robbery, Adultery; likewise of innumerable mechanical, chemical, and vital combinations, and changes, as Digestion, Nutrition, Circulation, are Complex in a greater or less degree. Thus, while notions of Substances are always Complex, modes may be either Complex or Simple.

3.—GENERAL NAMES, DEFINITION, AND DESCRIPTION.

39. Closely connected with the subject of notions or conceptions is that of Names. The doctrine of Names properly belongs to Logic, but some notice of them seems indispensable even in a pure Metaphysical treatise.

40. Words are conventional signs of thought, that is of Conceptions and Relations; and thoughts are the Representatives of things. Thus, words suggest thoughts, and thoughts stand for things. Words, then, are a sure index of the workings of the human mind, but not a sure index of things; for the workings of the human mind may or may not be in strict accordance with the nature of things. Indeed we well know that the thoughts of man are often fanciful in the highest degree, utterly at variance with existing things, as the thoughts of Swift when he wrote "Gulliver's Travels," and those of the author of the "Arabian Nights."

41. Words being the signs of thought, it follows that the divisions of the one must correspond to those of the other, the classes of words to those of thoughts. Accordingly, as thoughts are divided into the non-relative and the relative, or Conceptions and Relations, so are words into substantive and non-substantive.

42. Names, or Nouns Substantive, in the nominative case, are words which express something either actually existing, or supposed to exist, or imagined as existing, or simply conceived as existing, independently of other things; as Mount Etna, the Mountains of the Moon, Aladdin's Wonderful Lamp, whiteness, softness, hardness, colour, etc. All these things can be talked of as existing, whether they really exist or not, can be talked of as existing of themselves, whether they do or not, without ab-

surdity; and these in Logic we call Names, in Grammar, Nouns Substantive, but strictly in the nominative case only.

43. All other words, even the oblique cases of Nouns, not only imply relation, but cannot be discoursed of as existing alone. These, then, are strictly relative words. Thus, as the objects of Thought are either things, or the relations of things, and Thoughts themselves either non-relative or relative, so words are either names, or words expressive of the affections of names, such as adjectives, verbs, participles. Of Names alone it is here necessary to speak, because they correspond to Conceptions.

Name must not be confounded with *Term*, which is a purely logical word, and signifies any word which alone can form the subject, or the predicate, of a proposition. Thus, in the proposition "Man is mortal;" mortal, though an adjective, is a Term. These words are also called in logic *Categorematic*, because they can form alone either the Subject, or the Predicate, of a pure Categorical Proposition.

44. Names, or Nouns Substantive in the nominative case, form the Subject of every discourse, and in the accusative case the Object, when there is one, for many sentences have no object. It is clear that nothing but what exists, or is conceived as existing, independently, can either create or suffer change. The accusative case is generally marked

in Latin and Greek by a change in the form of the word, but, in English, only in the case of Pronouns. Thus, *Brutus jugulavit Cæsarem*, can only be rendered into English by Brutus stabbed Cæsar; though we say, I love him, He loved me. When the word undergoes a change of form, it becomes clear that it really is another word; but, whether the form change or not, a word in the accusative case, expressing an Object somehow affected by something else, is not a simple Name or Noun Substantive, but the same viewed relatively. The word Cæsarem by itself has no sense at all, and so with all Accusatives, and other cases.

45. Since Names are the signs of Conceptions, whatever classification we may adopt for the one, the same must apply to the other. Thus, as Conceptions are either *Particular* or *General*, so Names are either *Singular* or *Common*. The former are usually called *Proper Names*, and express an individual. These, consequently, express things really existing, or believed, or at least imagined, to exist, as Ben Nevis, El Dorado, Utopia.

46. Common or General Names, on the other hand, express universal things, having no real existence, but only conceived as existing; and these make up the mass of the names of every language. They may be divided, like General Conceptions, into *Abstract* and *Concrete* Names; the former expressing Modes, the latter Substances. Names of modes express either modes of substances, mental

or material, and so are Indeterminate, as Whiteness, Blueness, Hardness, Softness, Generosity, Charity, Avarice; or they express modes of Quantity, and so are Determinate, as mile, acre, square, circle. Concrete names, on the other hand, express Substances, as Mind, Body, Animal, Vegetable, Mineral, Man, Lion, Oak, Ash, Granite, Porphyry, Gold, Silver, Air, or Water.

47. After these observations on Names in general, we shall be better able to discuss the important subject of *Definition*. Some Names, as we shall find, can be *defined*, while others cannot; the objects expressed by Names can sometimes be *described*, sometimes not.

48. First, however, we must ascertain what a definition properly is, and what a description. By a definition, then, we understand such a statement as shall accurately express, in words, our *whole* Conception of the thing signified, and through the Conception make us thoroughly acquainted with the nature of the Thing. By a description, on the other hand, I mean such a statement as shall, more or less imperfectly, express our Conceptions, and give us some, but *incomplete* knowledge of the Thing.

49. And here I must remark, that an attempt has been very generally made by Logicians to distinguish between the definition of a Name, and the definition of a Thing; but, as I conceive, without success. I have never been able, with all my efforts, to understand that distinction. I have never seen

it made out in intelligible language, and, therefore, I must conclude that it is ill-founded. And in this opinion, I am confirmed by the authority of Pascal.[1] The definition of a Name, and the definition of a Thing are one and the same, and cannot be otherwise; for a Name without a Conception, and a Conception without a thing conceived (real or unreal) is a contradiction. Thus, the word Definition may be applied either to a Name, a Conception, or a Thing, or object conceived, with equal propriety. In defining we fix the meaning of a Name, or declare the Conception attached to it, and the Conception represents the Thing. Thus are all three intimately connected.

50. May not the explications of words in a dictionary be called Definitions of Names, in opposition to Definitions of Things? By no means. Sometimes they are really Definitions, as Johnson's explication of a Triangle, "A figure of three angles;" sometimes they are Descriptions, as his account of Animal, "A living creature corporeal;" sometimes they merely explain one word by one other word better known, as *Anomalism* by "Irregularity," without any attempt at analysis, and without analysis there can be no definition proper; sometimes, again, they enumerate many different meanings of the same word, and surely this in no sense can be called definition. But, if we will apply the word *Definition*

[1] Pascal, Pensées, Vol. I., "De l' Esprit Géométrique," Mr. Mill is of the same opinion, "System of Logic," Vol. I., Part i.

to Names, and insist upon a distinction between the definition of Names and that of Things, then the former can be attributed only to explication by a word strictly synonymous, as *Anomalism* by *Irregularity*, a word of Greek origin by one of Latin; for if many words be given, the statement will be either a Definition proper, or a Description more or less imperfect.

51. It is worthy of remark, that while in common language we apply the word *Definition* to Names, Conceptions, and Things, indifferently, we are said to *describe* only Things. We cannot with propriety talk of describing a Name or a Conception. The reason for this will appear presently. Common language, after all, is no bad instructor.

52. We have next to consider what Names can be defined, what not; what Things can be only described; and what can neither be defined nor described. This is an inquiry of very great importance, were it only to prevent us from seeking Definitions where they cannot be found. Much of the time and energies of the Schoolmen was thus wasted.

53. First, there are cases in which neither the Names can be defined, nor the things corresponding thereto described. So it is with the Names of all Simple Conceptions. Simple Conceptions must belong to General Abstract Notions, or Modes; for all Particular Notions, as we have seen, are Complex, and, likewise, all General Concrete Notions, or

Notions of Substances. Consequently, all Simple Conceptions are Simple Modes; and these, as before observed, are of two sorts; indeterminate modes, or modes of Substances, and determinate modes, or modes of Quantity. Instances of the former are the physical Qualities of Extension, Impenetrability, Solidity, Fluidity, Mobility, Divisibility, Whiteness, Blueness, Redness, etc.; of the latter, Space, Time, Number in general. These Names admit of no definition, nor can the things corresponding to them be described; because our conceptions of them are simple and uncompounded. For what is simple cannot be analysed, and what cannot be analysed cannot be defined, because every definition is an analysis, whereby a compound is reduced to its elements. Thus, in the definition of a Triangle, a figure with three sides and three angles, three elements are mentioned, figure, side, angle. And if the above Names cannot be defined, neither can the Things corresponding thereto be described, for the same reason, that we have no more simple conceptions by which to explain them. Who can define or explain Whiteness, Redness, Space, or Time? If any of the things corresponding to those Names can be described, then are our conceptions thereof not perfectly simple.

54. While Simple Modes can neither be defined nor described, Complex Modes, on the contrary, can be perfectly defined, and they alone. For Modes or general abstract notions are pecu-

liarly the creation of the mind of man, having nothing in reality corresponding to them, even in particular instances; and what the mind can form that it can define. All that is necessary is, that the mind be consistent with itself, that the conception of *Virtue*, for instance, be always the same, and this is surely in our power. No one pretends that there is outwardly any thing called *Virtue*, really existing, as a horse or a cow exists, and consequently our faculties, limited though they be, can determine the whole nature of Virtue; while of the works of God we know but little. These works neither are nor ever will be thoroughly known to us; but the notions which we ourselves frame, or which, at least, are framed in us, we surely may ascertain perfectly. Therefore complex modes, whether modes of Substances, or modes of Quantity, may be strictly defined.

55. Accordingly, Virtue, a Complex mode of the Substance Mind, may be defined to be, "An inflexible desire or will to pursue our own ultimate good, and that of others, whatever self-denial or self-sacrifice may be required,"[m] and Triangle, a mode of Quantity, is usually defined to be, "A figure with three sides and three angles." Now, each of these is truly a definition, for it ex-

[m] See the Author's "Principles of Human Happiness and Duty," Part II., Chap. iii.

presses our *whole* conception of the thing signified, not merely a part of that conception.

56. Lastly, the names of Substances cannot be defined; but the things may be described more or less *imperfectly*, so as to distinguish one from the other, well enough for practical purposes, though the knowledge thus communicated is always *incomplete*. For, as our knowledge of Substances, of the works of God, is very superficial, incomplete beyond measure, it is clearly impossible to give a definition, that is a perfect account of them. All the definitions hitherto attempted of Substances have only been short Descriptions.

57. Though several Substances are simple Bodies, or at least have never yet been analysed, as all the metals, and Sulphur, Phosphorus, Carbon, Oxygen gas, Hydrogen, Chlorine, etc., yet our Conception of them is far from simple. Take for instance iron or copper; of how many particulars is our notion of these metals made up; particulars relative to colour, weight, use, value, etc.! Who could pretend to enumerate all the points in which iron differs from copper, lead from tin, silver from gold? And though we could have *some* notion of all their differences, could we accurately distinguish them? Besides, different persons entertain different conceptions of these Substances, according to the opportunities which they may have had of becoming ac-

quainted with their qualities. Thus, a worker in metals must have a much more extensive knowledge of the properties of iron, lead, tin, and copper than others, and hence a more complex Conception of them; and a good chemist must have a more complex conception of all Substances than most people. So, supposing it were possible to define the *Genus* Metal, yet it would be out of our power to determine all the *Differentiæ* by which one *Species* of Metal is distinguished from another; for these *differentiæ* are too numerous, too indefinite, and too fluctuating in the conceptions of various individuals.

58. Here, however, fortunately, definitions are not required. No man is in danger of mistaking silver for gold, lead for iron, copper for zinc, for want of a definition; he has only to look at the substance attentively, to handle it, to ring it, and he knows it ever after.

59. The same observations apply to Substances of all kinds, organized as well as unorganized. Philosophers long puzzled themselves in seeking for a definition of MAN, and they might search for ever without finding one. The *Animal implume bipes*, the *featherless biped animal*, of Plato, was worthy only of the ridicule of Diogenes, and the *Rational Animal*, though not absurd, is no proper definition. In the first place, we cannot affirm that man alone has reason, for the tractable nature of many animals proves that

they do have some intellectual faculties which can be improved; but were the statement true, it would still be miserably incomplete; for man differs from other animals, not in Reason only, but in innumerable particulars. At best it could only be a *characteristic description*, that is, a description which adopts the most striking and important points of difference, and neglects the rest. But who wants a definition of man? Are we likely ever to confound man with any other animal? To seek for what is unnecessary for any purpose can be only philosophical trifling.

60. Books of Zoology and Botany are full of such short statements, whereby the various Genera and Species of Animals and Plants are distinguished from each other. The *Règne Animal* of Cuvier contains little else, and Smith's *Compendium Floræ Britannicæ* is entirely made up of them. These are properly *characteristic descriptions.* No one can pretend that the points stated are the only differences between the Species, or the greater number of them, they are only the most striking, and the most important, as supposed, among those known. We have reason to think that one species differs from another in innumerable particulars, the greater part of which will probably never be discovered, as they lie too deep for our limited faculties.

61. But some may say, is not this after all a verbal question? What you call a *characteristic*

description others call a *definition*, that is all the difference between you and them. By no means. I have stated above (48) what a definition is, and what a description, according to my notions, and it seems logical to call different things by different names. But if some think that the difference is not such as to warrant another name, in this we disagree, and the disagreement is shown by the use of two words, or of one only. Thus a question apparently of words is at bottom one of things.

62. Moreover, as above hinted, the common use of language points out some well-grounded distinction between definition and description, and shows that sometimes the one is possible, sometimes the other. Thus we can apply the word *definition* alike to Names, Conceptions, and Things, but we can *describe* things only. Why so? Why cannot we be said to describe Names and Conceptions? Because these we are supposed to know, or at least to be capable of knowing, *thoroughly*, Names being given by man, and Conceptions being entirely mental; and we may surely be well acquainted with our own inventions, and our own thoughts. But, as for things, since these we cannot pretend to know thoroughly in all cases,—sometimes we are said to define, sometimes only to describe them.

63. Now, what Things can be defined, what only described, we have already seen. In the

first place, none but Universals can be defined, and not all of them, only those not derived from particular things having an independent existence; for here the conception and the thing conceived must exactly correspond, and therefore in defining the one we also define the other. Such are the universals corresponding to our abstract notions, or Modes, as we have called them. But where the universals are derived from particular things having an independent existence, as all material Substances, minerals, plants, animals, there the universals cannot be defined, because we know but imperfectly the particular objects; and though our knowledge may increase, we never can be thoroughly acquainted with them. Thus the Universal and our Conception of it are perpetually varying. Lastly, particular things, as we have shown, (12) cannot be defined; but they may, like the Species of Substances, be described, as they so frequently are in travels and works of Imagination. Every day we are describing landscapes which we have seen, and the poet both imagines and describes them, as Milton describes Paradise, and Spenser the Gardens of Armida.

64. The difference between definition and description may be illustrated from Botany. In this Science, as is well known, two classifications have been adopted, the Artificial and the Natural; the one *invented* by Linnæus, the other first pro-

posed by Jussieu and De Candolle, in France, and, subsequently, improved by others. Now, as the former is professedly artificial, and arranges plants into classes and orders, not from all their resemblances, but from one or two only, chosen as most convenient; it follows that those classes and orders can be strictly defined; though the natural cannot. Thus, having resolved to class together all plants having one stamen, or two, or three, etc., whatever their points of difference may otherwise be, it becomes easy to *define* the classes, *Monandria*, *Diandria*, *Triandria*, etc., accordingly. But, when we seek to class plants agreeably to *all* their points of resemblance, the task becomes a very difficult one. Still, some advance has been made, and all plants have been divided into *Exogens*, *Endogens*, and *Cryptogamic* plants, and subdivided into many orders, separated by characteristic differences, some of which are known and can be stated, while the greater part are still unknown, and will probably always so remain. Even the differences ascertained are not always constant. Thus, the *Arum*, though an Endogen, has not the proper leaves of its class. Therefore, the natural classes and orders may be *described* with more or less accuracy, but they cannot strictly be *defined*. And, if the classes and orders cannot be defined, still less can the Genera and Species, which in all systems are natural, and present, of course, many more points of resemblance and difference than

the classes. We can have characteristic descriptions which are quite sufficient in practice to distinguish one genus or species from another; but more we cannot have. So it is with the Classes, Genera, and Species of Animals; for, in Zoology, Artificial Systems have no place.

65. Since the times of Aristotle and the Schoolmen it has been generally said and allowed that the only way of defining is by *Genus* and *Differentia.* This position, no doubt, has been disputed by Locke, and therefore it demands attentive consideration. If the statement imply that every definition should consist of two parts, and of two parts only, expressive of two points, one marking the *Genus*, the other the *Species*; then it may be boldly affirmed that this is only a vain *a priori* attempt to tie down nature, and force her into system. For many things cannot be defined so simply; though others may. Thus in the definitions of the various kinds of triangle, viz. an equilateral triangle, a triangle with three equal sides; an isosceles triangle, one with two equal sides; a scalene triangle, one with three unequal sides; a right-angled triangle, one which has a right angle, etc.; two points alone are necessary. But when we come to define the various sorts of four-sided figures, we say that a square is a four-sided figure, with all its sides equal, and all its angles right angles; an oblong, one with all its angles right angles, but not all

its sides equal; a rhombus, one that has all its sides equal, but its angles not right angles; and a rhomboid, one having its opposite sides equal, but all its sides not equal, nor its angles right angles. Thus, allowing four-sided figures to constitute a Genus, we are obliged to enumerate two points at least, two *differentiæ*, in order to distinguish one Species of four-sided figures from another. In the last instance, three *differentiæ* must be stated; and were we to define a Trapezium, we must say that it is a four-sided figure, but neither a square, nor an oblong, nor a rhombus, nor a rhomboid, thus increasing the number of *differentiæ*. These examples are sufficient to prove that definition by *Genus* and one *differentia* is not always possible.

66. There is indeed one way in which technical simplicity might be apparently preserved, and that is, by creating new *Sub-genera* to suit the occasion. Thus, instead of defining a square to be a four-sided figure, having all its sides equal, and all its angles right angles, we might say that a square is a four-sided equilateral figure, having all its angles right angles; thus making a *Genus* of four-sided equilateral figures, of which square and rhombus are Species. In this way the credit of system would be saved, though, it must be confessed, rather awkwardly at times. For instance, in order to reduce the

definition of rhomboid to rule, we must say that a rhomboid is a four-non-equal-equal-opposite-sided figure, not having its angles right angles; thus making a *Genus* to comprehend rhomboid and oblong which *has* right angles. Whether it be worth while to resort to such expedients to save the credit of the Scholastic System, we shall not inquire.

67. Having shown that definition by *Genus* and one *Differentia* is not always possible, we may next inquire whether we can always define by *Genus* and one or more *Differentiæ*. Since, as we have seen, a definition ought to express accurately in words our *whole* conception of the thing signified, it is clear that it ought to enumerate all the simple conceptions which make up the complex conception. But when we define by the nearest *Genus* and *Differentia*, we do not enumerate all the simple conceptions, for, unless it be a *Summum Genus*, the Genus itself is complex, and may be analysed. Consequently, definition by the nearest *Genus* is only convenient, not necessary,—convenient for the sake of abridgment, and nothing more. To give the definition in full, we should mount up at once to the *Summum Genus*, and enumerate all the *Differentiæ*. Thus, in the definition of a triangle, a figure with three sides and three angles, it is taken for granted that we know what a figure is; but, were the whole stated, we should say

that a triangle is something bounded by lines, having three sides and three angles. In like manner, in the so-called definition of Man (for we do not allow it to be a definition proper), a rational Animal, it is manifest that the Genus Animal must be itself analysed and defined before we can have a full account of man.

68. But we may go farther and raise a question, whether definition by regular *Genera* and *Differentiæ*, one above another, though convenient, be always possible. It is not every resemblance that induces us to class things into *Genera* and *Species*; but only certain resemblances, general, striking, important, or useful. It therefore may happen that there is no Genus to which we can refer the object, other than the Summum Genus *thing*, or something nearly as general. Thus, in the definition of parallel straight lines, which are said to be "such as are in the same plane, and which, being produced ever so far both ways, do not meet," we can discover no Genus whatsoever to which these belong, except that of straight line in general, for of lines in the same plane we have never made a *Genus*. This, then, must be considered as a *Differentia*, and the above definition will consist of the high *Genus*, straight line, and the two *Differentiæ*, lying in the same plane, and never meeting though produced indefinitely.

69. Furthermore, there are some definitions

in Geometry in which we can make out no distinction between *Genus* and *Differentia.* For instance, we are told that a plane angle "is the inclination of two lines to each other in a plane, which meet together, but are not in the same straight line." It would not be easy to reduce this definition to Logical rule.

SECTION THIRD.

ORIGIN OF CONCEPTION.

1. Having considered the nature of Conception in general, and the various kinds of Conceptions, we have next to trace the origin of this mental faculty.

2. We have already remarked that Conception in general is not an original faculty, that it reproduces a former state of mind, more or less modified, no doubt, but still, as it were, a copy of an original. Conception, then, cannot be one of the earliest powers of the mind.

3. The above holds true of Conception as commonly understood; but we have seen that Perception really comprehends a Conception proper, which, in this case, and in this alone, may be considered as original, because, though arising from another state of mind, namely, a Sensation, yet it differs widely from Sensation. When I

stretch out my hand and touch a book on the table, the conception of the book is totally different from the Sensation of touch which preceded it; and as it can be derived from no other previous state of mind, this Conception, comprised in the Perception, is truly a new, an original phenomenon; though, in the order of time, subsequent to the Sensation which occasioned it. This subsequence in time does not destroy the originality or newness of the phenomenon, or the wide difference between the conception and its antecedents.

4. Barring this, all Conceptions are derived from other and previous mental phenomena, which they recal and reproduce in a modified form, and, therefore, they cannot be original. It remains, then, to be seen what are the originals of these copies.

5. We have seen that, of all mental phenomena, Sensations are certainly the earliest, Emotions, probably, the next; and that both these classes, which together constitute the Feelings, are, truly and properly, original. After them come Perceptions, and, subsequently, Conceptions. Therefore, Conceptions, not being themselves original, must be copied or derived, either from Sensations, Emotions, or Perceptions; or from all of these.

6. First, as to Sensations. It is perfectly clear that we can form no Conception of any Sensation which we had not previously *felt;* but having *felt* it once, we can ever afterwards *conceive* it. No

power of words could give a man born blind any Conception of Colours, or a man born deaf any Conception of Sounds; but having once experienced those Sensations, we can easily recal them in Conception, though no Sensation be then felt. Therefore, Sensation is certainly one source of Conception.

7. The above remark must be taken with one limitation, which is, that although no Sensation utterly different from any other can be conceived before felt, yet when Sensations vary but slightly, or only in degree, then previous feeling does not seem necessary to Conception. Thus, though a knowledge of colours will give no Conception of sounds, or *vice versâ*, nor even a knowledge of one colour, scarlet, suggest any notion of green; yet one shade of scarlet, or of green, may enable us to conceive a darker or lighter shade of the same colour, though these exact shades may never have been seen. So, having heard one sort of sound, we can conceive it more or less loud. Thus, within a limited range, a slight degree of originality is left to Conception.

8. Next as to Emotions. In this case, as in the former, it is certain that we can conceive no Emotion which we had not previously *felt;* as also, that, having once experienced Emotion, we can conceive it, though unfelt. How could we give a Conception of Love, Ambition, or Covetousness, to one who had never harboured these Passions? How teach Beauty to one who had never felt its

charm? If the Emotions be original, they must be inexplicable by any form of words, which, being merely conventional signs, always suppose that our original feelings are known by experience. We could as easily teach colour to a blind man, as passion to one without desires. As it is, one man is often a riddle to another, because he cannot easily conceive the desires which animate him; but desires of some kind all men have experienced, otherwise, they could know nothing of human nature. And, having once felt Emotion, we can afterwards easily conceive the same; for we perfectly understand Philosophical Essays, Histories, Tales, and Plays, which treat of the Passions, though at the time we may be quite cool. It appears, then, that Emotion is a second source of Conception.

9. Thirdly, as to Perceptions. When we open our eyes, we perceive a multitude of objects; trees, fields, houses, rivers, mountains, or it may be the moon, the planets, and a countless host of stars. We close our eyes, or we retire into a dark place, and we perceive these objects no longer. Are they then to us as if they had never been, or as if we had never perceived them? By no means. In total darkness, in the dead of night, they rise up before us, they re-appear, similar though not the same; they fill our minds with Conceptions.

10. These Conceptions, then, are derived from Perceptions, and they are, as we all know, like to their originals, or copies of the same, as far as the

word is applicable to mental phenomena. They need not, however, be servile copies, for the mind has a power of varying its Conceptions, so as to form combinations of objects different from any which it had ever perceived, different even from any which exist in nature; such as the unicorn of the ancients, and the colossal man-headed bulls and lions of the palaces of Nineveh. This is the power of *Imagination.* Still, the elements of such objects must first have been perceived. I do not believe that any one who knew not by perception his own body, or that of some animal, could imagine an animal of any kind, or that one who had never perceived plants, earth, stones, water, fire, could conceive such objects.

11. It must, however, be allowed that much more freedom is given to our Conceptions thus derived, than to those which are copied from our Sensations and Emotions. Literature is full of works of fiction and imagination, of poetry, novels, and romances, wherein new scenes, new animals, nay, new worlds are depicted. Our great dramatist is said to "have exhausted worlds and then invented new." The objects around us, which strike our senses, may be compared to the letters of the alphabet, which, by combination, form innumerable words. Such is nature to the man of poetical genius. It is the elementary matter out of which he creates a world of his own, newer at least, if not more fair, than that which we behold. We acknowledge no other Prometheus.

12. What a source of amusement to the mind is this Power of Conception! Without this, so long as our eyes were open, so long as it was light, we should be filled and gratified with our Perceptions; but, when night came on, all would be blank. Silent and solitary, and yet wakeful, our minds could not be filled and amused with the lively images of what we had seen during the day past, or in years long gone by; we could not wander again over the hills of Alba, gaze upon the fall of Terni, or sit beside the temples of Pæstum. And without the power of recalling sensible objects, without visual conceptions especially, which bring back visible objects, without Imagination, which varies them, Poetry of course could have no existence.

13. As particular conceptions, or more properly conceptions of things particular, are derived from Sensations, Emotions, and Perceptions, so general Conceptions, or more correctly conceptions of universals, are drawn from such as are particular. We have seen that, when many objects agree in one or more points, the mind seizes upon these resemblances, and constructs out of them a fictitious entity called an Universal; as when from an attentive consideration of John, William, Thomas, and Alexander, it creates the universal Man. Consequently, the general conception, as it is called, must be subsequent to those particular conceptions from which it sprang.

14. Though General Conceptions are, in the

order of time, subsequent to particular, and dependent on them, yet they require a greater effort of mind than these; for, as we have seen, particular conceptions are little more than copies, more or less faint, of their originals, with some variation; whereas general conceptions require attentive observation and discrimination, and consequently suppose a much greater development and variety of mental power. Accurately to classify objects requires superior intellect, and all classification, which supposes some general notions, demands more or less of the same. Consequently, the power of forming general conceptions, embracing, as it does, Abstraction and Generalization, is a much more original as well as higher power than that of Simple Conception.

CHAPTER V.

OF MEMORY.

SECTION FIRST.

WHAT IS MEMORY?

1. Memory is that faculty by which any mental state whereof we once were conscious is recalled, and at the same time believed to have been formerly experienced. Therefore a Remembrance, or particular act of Memory, consists in any mental phenomenon whatsoever, combined with the Belief that we were before conscious of the same, or, more properly, of a similar phenomenon; for, of course, what is past and gone and what is present and existing cannot be identical.

2. Memory then differs from Perception, inasmuch as the latter supposes a present, the former a past object; and whereas the object of Perception is always something material, which induces perception through the senses, the object of memory is some prior state of our own consciousness. Perception, then, gives us a knowledge of the present, but only of material objects; while

Memory acquaints us with the past, first with the past states of our own mind, and through them with every thing else.

3. Neither in the case of Perception nor of Memory is this knowledge properly *immediate*, for we have seen that our acquaintance with the material world is derived through the medium of the senses; and, moreover, that an immediate or conscious knowledge of matter is absurd; and an immediate knowledge of the past is a contradiction, whatever Reid may say to the contrary.[a]

"For we can only know a thing immediately if we know it in itself, or as existing; but what is past cannot be known in itself, for it is non-existent."[b]

4. Memory differs also from mere Conception, for we can conceive many things without being conscious at the time that the present is but a repetition of the past; and we even conceive things which never before entered into our minds; as imaginary scenes of nature, and imaginary animals. No doubt Conception is an essential part of Memory, for we can remember nothing without conceiving what we remember; but Conception may exist without Memory.

5. We have said that Memory embraces every

[a] "It is by memory that we have an immediate knowledge of things past." "Reid's Intellectual Powers," Essay III. chap. 1.

[b] "Hamilton's note to the above."

mental phenomenon whatsoever of which we formerly were conscious. Accordingly, we remember Sensations, Emotions, Perceptions, Conceptions, and Relations of all kinds, including judgments and reasonings. What then is peculiar to Memory? First, there is the tendency, the facility, to recall any past mental phenomenon, and secondly, the irresistible belief in the former existence of the said phenomenon. This tendency and this belief are all that is peculiar to Memory.

SECTION SECOND.

OF TIME.

1. Sensations, Emotions, Perceptions, and mere Conceptions, look only to the present moment, and therefore give us no notion of TIME, which implies succession. For this we are indebted to Memory, which introduces us to the knowledge of the past, as distinct from the present, and hence of the future; for the present is future to the past.

2. It is clear that we cannot believe in the *former* existence of any thing without some notion of former and latter, that is of Time; and consequently this notion not only arises along with Memory, but is an essential part of it. Indeed, the one cannot exist without the other. Memory

can no more exist without the notion of Time, than the notion of Time without Memory. Time and Succession are the same, or, at least, they are inseparable, and how can we know Succession but by Memory? Here, then, at the first, we see the immense importance of this faculty. Without Memory, without a knowledge of Time, our knowledge would be confined to the present moment, and therefore could never increase.

3. It is clear that our knowledge of Time can be immediately derived only from the phenomena of our own minds, not from any outward change; for outward change or motion is known to us only through a succession of perceptions, and, therefore these must be the immediate antecedents of our notion of Time. Motion may be thus a *remote* source of this notion, but we have no reason to suppose that it is the only one, or that a succession of mental phenomena, of whatever sort, or however derived, may not create Memory, and suggest the notion of Time.

4. Though the notion of Time be thus got by comparing a present state of mind with a past, we are not thence to infer that the notion is not altogether different from the phenomena which precede its appearance. Those phenomena might recur without any conception of Time, as they often do, and therefore Time is not *involved* in them. On the contrary, it is *evolved* by them, or struck out of the mind, like a flint out of a bed

of chalk, something quite different from the surrounding mass. Effects are often widely different from their causes, especially from their occasional or auxiliary causes; and so it is in this case. A succession of mental phenomena is the occasional and exciting cause of the notion of Time; the primary and predisponent lying deep in the original structure of the mind itself. If there be an original notion, it is that of Time.

5. What then is Time? what notion have we of it? An absurd question! Either we know it perfectly, or if not, no words can tell us. It was St. Augustin, I think, who said "Ask me not, and I know it well; question me, and I am quite at a loss." No doubt for how can we illustrate and explain that which by its originality and simplicity baffles both illustration and explanation? The notion of Time is so original, so new, so different from any other, that there is nothing with which to compare it, so as to help our apprehension; and it is so simple as to defy analysis, definition, or description. The truth is that we know it so well, that there is nothing which we know better, and which might help to explain it. We know it as intimately as we can any thing whatsoever; and it is exactly because it is so simple that we are conscious of that incomprehensibility which at bottom envelopes it and every thing. Could we explain Time, our minds would be so far satisfied, but the more simple notions by which we should

explain it would be themselves as incomprehensible as any. It is then the very perfection of our knowledge of Time, so far as human knowledge admits of perfection, that enables us to see the limitation of our faculties, and makes us suppose that we are here peculiarly ignorant. But the very reverse is the case. Our knowledge of Time is peculiarly clear, definite, and precise, as is that of Space; and upon them is built the only perfect science, the Mathematics. The relations of Time are relations of Quantity, and therefore they may be perfectly ascertained.[c]

6. What is peculiarly incomprehensible about Time is its beginning, or its past Eternity, for one or the other must be true, and yet our faculties can comprehend neither. We are forced however to confess our belief in the Eternity of past Time, though the more we consider it, the more mysterious it appears. We have no difficulty in comprehending a future Eternity; indeed, we cannot possibly comprehend or believe in the cessation of Time. When Eternity is opposed to Time, the infinite is opposed to a finite Quantity of the same kind, not of a different kind; and this, as Mathematicians as well as divines assert, is an infinite ratio, a ratio of one to Zero.

[c] On Time and Space as the foundations of Mathematics, see the Author's "Introduction to Mental Philosophy." Part 1. Art. QUANTITY.

7. What has been said of TIME applies also to SPACE. Our knowledge of Space is perfect, as far as human knowledge can be; we can trace its relations with the utmost accuracy; and yet we can comprehend neither how space can be limited, nor how it can be unlimited. Thus it is the simplest notions, those which we know best, which show us most clearly the narrowness of our faculties. Our knowledge is here perfect as far as it goes, but beyond that there is no ground for conception, judgment, or reasoning, all is void and dark. We are brought up as if by a dead wall, or a dense mist, we come at once to a stop.

8. If the notion of Time arise out of a succession of mental phenomena, it ought to follow that the greater the number of different phenomena in the same period, the longer the time should appear, and *vice versa*: and so it is. When we look back upon a period of great variety and vicissitude, of travel and adventure, the time seems very long; whereas a life of monotony and routine appears, on the retrospect, very short. Hours past in thinking upon one knotty point seem like minutes, while a year of varied impressions is a life. "My life is but a long day," said to me one whose occupation was full of sameness. On the other hand, "Paris vécut un siècle dans ses huit derniers jours d'attente et de confusion," says Lamartine, of the week immediately preceding Napoleon's return to Paris from Elba, a week full

of surprise, indignation, bewilderment, hope and fear.[d]

9. To this it has been objected that a period of suffering or uneasiness generally appears long, while time spent agreeably seems short; and as there is no reason to suppose that our thoughts, emotions, or sensations, are more varied in the former case than in the latter, but the contrary, the theory does not hold good.

10. If time pass slow with the unhappy, especially with the restless, it is because they are always wishing it away; and if it pass quick with the happy and the amused, particularly with the contented, it is for the contrary reason. Here then a cause comes in to counteract the other; but this does not disprove the original tendency. Accordingly, when the disturbing cause ceases to operate, when the period of uneasiness or of contentment is past, then, if the former have been one of bodily pain, or of unvaried suffering of any kind, it will appear short; and if the latter have been a time of amusement, properly so called, it will seem long.

11. *Orlando.*—"I pr'ythee who doth Time trot withal?"[e]

[d] "Paris lived an age during these last eight days of expectation and bewilderment."—*Histoire de la Restauration. Livre xix. Sec. iii.*

[e] "As you like it." Act iii. Scene 2.

Rosalind.—"Marry he trots hard with a young maid, between the contract of her marriage and the day it is solemnized; if the interim be but a se'nnight, time's pace is so hard that it seems the length of seven years." Thus it is restlessness, the wish to leap over time, not unhappiness simply, that makes it seem long. So far from unhappiness, the interim is one of joy.

Orlando.—"Who doth he gallop withal

Rosalind.—"With a thief to the gallows: for though he go as softly as foot can fall, he thinks himself too soon there." Here it is not joy that makes the interval pass quickly, for there is only misery, but the wish to arrest the foot of time. Ardent hope makes time to creep in the midst of joy; and intense fear causes it to gallop during misery.

But, *Orlando.*—"Who stays it withal?"

Rosalind.—"With lawyers in the vacation: for they sleep between term and term, and then they perceive not how time moves." True, in deep sleep, in sleep without dreaming, the moment of awaking seems to touch that of going to sleep, the interval is totally lost, a sure proof that without a succession of mental phenomena we should have no notion of Time.

12. Reid objects "I have heard a military officer, a man of candour and observation, say, that the time he was engaged in hot action always appeared to him much shorter than it really was.

Yet, I think, it cannot be supposed that the succession of ideas was then slower than usual."[f] If the time in such circumstances seem short, it is because the mind is too much engaged to think of its lapse. It is the thinking about time, the watching of it, which makes it appear long, forgetfulness short. However rapid the succession of ideas may be, this will not cause time to seem long, unless it be reflected on. Now hurry and danger drive away all reflection; but I have no doubt that when the moment of reflection does come, then a day spent in marching and countermarching, and in all the vicissitudes of hot action, will appear very long.

13. "Mr. Locke," says Reid, "draws some conclusions from his account of the idea of duration, which may serve as a touchstone to discover how far it is genuine. One is, that, if it were possible for a waking man to keep only one idea in his mind, without variation, or the succession of others, he would have no perception of duration at all; and the moment he began to have this idea would seem to have no distance from the moment he ceased to have it." This conclusion appears to me just. Time, like motion, requires some mark, in order to be known; and without some change of ideas, we should no more have been conscious of Time, than we should have been aware of the

[f] Intellectual Powers. Essay iii. Chap. V.

motion of the earth without a change in the position of the heavenly bodies. "Now," continues Reid, "That one idea should seem to have no duration, and that a multiplication of that no duration should seem to have duration, appears to me as impossible as that the multiplication of nothing should produce something.[s] Here there is a total misapprehension. It is not said that the multiplication of one idea would seem to have duration, but that, out of a succession of ideas, of different ideas, would arise the notion of Time. It is variety, not sameness, that strikes out the new notion.

14. Again; "If the idea of duration were got merely by the succession of ideas in our minds; that succession must to ourselves appear equally quick at all times, because, the only measure of duration is the *number* of succeeding ideas; but I believe every man capable of reflection will be sensible that at one time his thoughts come slowly and heavily, and at another time have a much quicker and livelier motion? Now, what we assert is, that the notion of Time *originates* by reflecting on the succession of ideas in our minds; not that, when the notion is got, such succession is the only measure of duration. Afterwards, we have many measures of time, and once

[s] Ibid.

having the notion from a succession of ideas, we can allow duration to a single idea, and may be conscious that one remains longer in our minds than another. In fact we soon come to know that the succession of ideas in our own minds is a very uncertain *measure* of time, though, without such succession, we should never have had the notion at all. And though we may have some consciousness of the rapid and slow flow of our ideas, I believe that it is more by considering what we have done during a given time, as measured by a clock, hour-glass, change of position of the heavenly bodies, or any other sure indication, that we become sensible of a quick or tardy march of mind.

15. Though we can set no bounds to the divisibility of Time, any more than of Space, yet in common life we consider Time in two lights, either as a point practically indivisible, or as a period capable of division and measurement. Thus, when I say, I shall be with you to-morrow afternoon at three o'clock, I fix a point of Time like a mathematical point in Space; but when I add, I shall remain with you during twenty minutes, I mention a period, divisible into minutes, and so measured. This difference is marked in English by the prepositions *at* and *during*; while in Latin it is expressed by a difference of case, a point of time being commonly put in the Ablative, duration in the Accusative. The

distinction is necessary in practice, though time without duration be really an absurdity.

SECTION THIRD.

OF PERSONAL IDENTITY.

1. Besides the notion of Time we are indebted to Memory for a knowledge of SELF, the foundation of all other knowledge; for without the belief that we ourselves formerly thought or felt, we could have no acquaintance with the past, and consequently no grounds for expecting what is to come. Our knowledge would be limited to the present moment, and therefore could never be enlarged.

2. As soon as we can remember any previous state of Consciousness, whether of feeling or of thought, an irresistible belief comes over us that the Being who formerly felt or thought, and He who now feels and thinks, is one and the same, really, not metaphorically, the same, not similar, strictly One and Indivisible. And however long ago may be the fact which we remember, the belief is still unshaken. But as our bodies, like all material objects, are perpetually changing, so as to remain strictly the same not for a single day, therefore if there be Identity in man, it must be

identity of something different from matter, that is, something immaterial. Consequently, the Identity of man and his Immateriality rest upon the same foundation; if we believe the one, we are bound to admit the other. That we must believe the former, we shall see presently.

3. It thus appears that our belief in our own identity originates in that form of Consciousness which we call Memory; so that without the faculty of remembering, we never should have known ourselves. This is a very different doctrine from that brought forward by Locke, who maintains that Consciousness, which, in this case, can mean nothing but Memory, actually constitutes Self; so that so far as a man's memory extends he is the same man, and no further. It is unnecessary to dilate upon this doctrine, which admits of so easy a refutation, and indeed has been refuted repeatedly; a doctrine which substitutes the means of knowledge for the thing thereby known, which makes no difference between a fleeting phenomenon and a permanent substance, and so destroys all that is constant in mind, all whereon we build our hopes; finally, a doctrine which leads to downright absurdity; for from this it would follow that if a man were to forget an event of his past life to-day, and recall it to-morrow, he should have changed his identity from one day to the other. In the words of John Sergeant, an early critic of Locke, "a man must

be the same, ere he can know or be conscious that he is the same," an observation of itself sufficient to refute the above opinion.[h]

4. Upon our personal identity, our perfect sameness, oneness, permanence, and immateriality, which all hold together, rest not only all personal responsibility, all personal merit or demerit, all liability to praise or blame here, but also our hopes of continuance hereafter. If our identity be nothing more than a fleeting phenomenon of consciousness, how can it survive that consciousness? Must it not pass away like the foam on the river, or like the morning hoar frost? And if our boasted identity be only such as matter admits of, that is, mere similarity, then this similarity may disappear, like everything material, by degrees, or all at once, by slow decay, or by violent convulsion. But, if there be something which remains truly one and the same amid all the fleeting phenomena which it presents, something permanent and indivisible, and which therefore cannot be material, then it may remain though the earthy body return to earth inanimate. Nay, it is reasonable to infer that what has continued the same so long, shall continue longer, seeing it is not subject like matter to modifications which destroy identity, and can perish therefore only by annihilation. But we have

[h] See Hamilton's Notes to Reid's Intellectual Powers. Essay iii. Chap. VI.

no reason to believe that any particle of matter has ever been annihilated, why then should the Soul?

SECTION FOURTH.

ORIGIN OF MEMORY.

1. With respect to the origin of Memory little need now be said. We can conceive many things which we formerly perceived or felt, without calling to mind our former perceptions or feelings; but we cannot remember without conceiving what we remember. Therefore the faculty of Memory is subsequent to Conception, and dependent thereon. And as Conception is subsequent to Sensation, Emotion, and Perception, much more must Memory follow after all these.

2. This subsequence in the order of time, and this dependence upon conception, do not however impair the originality of Memory, its perfect newness, the wide difference between it and those other earlier faculties. Memory is neither Sensation, Emotion, Perception, nor mere Conception, though this last be necessary to it. We have seen that what is peculiar to memory is *First*, the tendency, the facility to recal any past state of consciousness: and *Secondly*, the tendency to a firm belief in the former existence of such a state. These tendencies together constitute the faculty of Memory, and they are tendencies quite original or new, arising, it may be, out of former mental ten-

dencies, but essentially different from these. So, a Remembrance, or particular act of Memory, consists of a conception of some past state of consciousness, such as a Sensation, Emotion or Perception, accompanied with the Belief that such a Sensation, etc., was formerly experienced. Here, though the conception be nothing new, the belief is an original phenomenon; for the belief which attends Perception is a belief in the present, not in the past, existence of the object. This gives quite a new character to Belief, an original character, though belief itself be not new, having previously been known in Perception.

3. Since Memory extends to every previous state of Consciousness, for we can remember former judgments and reasonings, nay, whole discourses, not merely separate Sensations, Emotions, and Perceptions, therefore not only Conceptions properly so called, but Relations also may be combined with the phenomenon of Belief in Remembrance. Relations of which we were formerly conscious reappear, along with the firm persuasion that they were before known, and we can remember them as well as we do the moon of yesterday.

SECTION FIFTH.

EVIDENCE AFFORDED BY MEMORY.

But what evidence have we that the be-

lief implanted in us by Memory is to be depended on? How can we be sure that what we remember to have happened actually did happen? To this the proper answer is, that we cannot help believing in the faithfulness of Memory, that all men do believe in it instinctively, prior to experience, and that all knowledge depends upon this belief. Without trusting our memories we cannot advance one step beyond the present impression, whatever that may be. Still, the faithfulness of memory is by no means self-evident, nor can it be proved by logical argument, for there is no contradiction in supposing that memory may tell what is false; and there are no premises from which we can prove it to be true. Therefore, belief in the faithfulness of memory must be set down as one of the Fundamental Articles of our Creed, Articles not self-evident, but which, from the primary constitution of our nature, we cannot help embracing, without question, without hesitation.

2. That we may be sure that the belief in question is really entitled to a place in the above category, let us consider what are the marks by which we may know any Article of Belief to be really original and fundamental.

First, the belief must be *universal.*

Secondly, the belief must be *irresistible*, an essential part of our Mental being, of which no one, not even the greatest Sceptic, can divest himself.

Thirdly, it must be prior to experience.

Fourthly, it must be indispensable to all subsequent knowledge.

Fifthly, it must not be self-evident like the Axioms of Mathematics.

Sixthly, it must admit of no proper logical proof. Now, if we apply these Criteria to our belief in the faithfulness of memory, we shall find that they suit it exactly, and therefore we must admit it to be an original and fundamental Article of our Metaphysical Creed.

3. If we reject that Creed, we reject all knowledge, but against this human nature rebels. Knowledge, like the machines of Archimedes, must have a fixed point, a fulcrum, to rest upon; proof must depend upon premises, and where these are not self-evident, they must be assumed, otherwise we are stopped at once. Even the evidence of Mathematical truth depends upon memory, for we cannot go beyond the first principles without reasoning, and reasoning supposes that we remember, and rely on, what we proved or admitted before.

4. We might indeed pretend to establish our trust in Memory on reasoning thus:

Whatever is universally believed is worthy of credit; the facts attested by memory are universally believed; therefore they are worthy of credit.

The argument here is no doubt sound, it is

correctly drawn from the premises; but the premises are assumed; for it may be asked why is universal belief an assurance of truth? May not all men believe a lie? Does not the assumption require proof as much as the conclusion drawn from it? So vain is the attempt to prove everything; so illusory the supposition that we can ever do away with Primary Instinctive Universal Articles of Belief! All we can do is to lay down Criteria or tests whereby we may distinguish between genuine and spurious Fundamental Articles, and this we have endeavoured to accomplish.

5. Whatever has been said of the evidence afforded by Memory applies with equal force to the evidence of that great fact which we come to know by means of Memory, namely, our Personal Identity. When we remember any past phenomenon of consciousness, we are convinced not only that such a phenomenon formerly existed, but also that the subject of that phenomenon, and the subject who now thinks or feels, are strictly one and the same, the same now, then, and during all the intervening period, the Indivisible Self.

6. This is a fact which no one has ever really doubted, or can doubt; though it is not self-evident, nor can it be proved by reasoning. We do not see how, amid all the changing phenomena of consciousness, something still remains the same; nor, however difficult it may be to bring home anything so foreign to our notions, is there any self-

evident contradiction in supposing that a phenomenon formerly known to another, or to no one, should be made known to me now, together with the belief, though a false one, that I myself was once conscious of the same. However extravagant such a supposition may be, it is not self-contradictory. Consequently our Personal Identity is not a self-evident fact.

7. From what premises then shall we start to prove this great fact? It is clear that there are none which do not themselves require proof as much as the fact to be proved; nay which do not actually take for granted the very fact in question. Thus were we to pretend to prove it from the proposition formerly mentioned, "Whatever is universally believed is worthy of credit," it would be evident not only that this proposition itself required proof quite as much as the fact of our Identity, but also that it really supposes the latter to be true. Universally believed by whom? By men no doubt. Then there are men capable of maintaining belief during days and years; men who think in short, not merely thoughts without a permanent subject; and if so, men have identity.

8. If then our Personal Identity be neither a self-evident fact, nor capable of proof by reasoning, it must, if credible, be a Fundamental Article of belief, instinctive and original. Let us apply our Criteria or Tests to the present case.

First, Belief in our own identity is certainly *Universal.*

Secondly, it is *irresistible.*

Thirdly, it is prior to experience; for every lesson derived from Experience supposes that *Self* has experienced.

Fourthly, it must be indispensable to all subsequent knowledge, for in every step it is assumed that we who now learn, and we who formerly learnt, are the same. If not sure of ourselves, how can we be sure of anything else?

Fifthly, it is not self-evident, as has been shown.

Sixthly, it admits of no proper logical proof, as we have also seen. Therefore we may rest assured that Belief in our own Identity, amid innumerable changes of phenomena, Belief in our numerical oneness and indivisibility, is instinctive, original, and fundamental, and therefore entitled to a place in our Primary Metaphysical Creed.

9. The immediate deduction from this Fundamental Article is the Immateriality of that something which we call *Self;* for, whatever is numerically One and Indivisible cannot be material. The inference is irresistible, and therefore the conclusion is as much entitled to belief as the Fundamental Article itself.

SECTION SIXTH.

CONNECTION OF MEMORY WITH THE OTHER INTELLECTUAL FACULTIES. COMPARISON WITH THESE. CAUSES OF ITS IMPROVEMENT AND DECLINE.

1. Since Memory depends for its development upon previous Sensations, Emotions, Perceptions and Conceptions, it follows that facility and accuracy in remembering will vary with the quality of those mental phenomena, that the more acute the Sensations, the more lively the Emotions, the more accurate the Perceptions and Conceptions, the more retentive, the more exact, will be the Memory. Much then will certainly depend upon the original impression; and this we know from experience to be the case. When Memory begins to fail in the aged, it is not the events of their youth, although so remote, which they forget, but the occurrences of yesterday, a remarkable proof how much depends upon the liveliness of the first impression. What we have deeply *felt* we never forget, whether it be pain or pleasure.

2. Lively and delicate Sensibility to pleasure and pain, whether bodily, usually so called, or mental, whether Sensation or Emotion, is then one cause of goodness of memory. And as men's sensibilities vary indefinitely, so do their memories. Some remember well the small events of past years, and could write down a history of their lives with won-

derful minuteness; while others can scarcely distinguish one year from another. Of course, the nature of the life led, whether varied or monotonous, and habits of abstraction or the contrary, will make a great difference in the remembrance. Variety stimulates, monotony deadens sensibility; and nothing can strike or be remembered unless it be observed. Hence women, who are generally less abstracted than men, less taken up with one pursuit, should better remember the small events of life. On the other hand, how can a man of science, who lives in abstractions, or a man of business, whose head is always full of calculations, be supposed to remember passing occurrences?

3. Whatever has been imperfectly perceived, or indistinctly conceived, must of course be confusedly remembered; but here the fault is in the original impression, not in memory, which does its duty when it fairly represents the past. If clear Perception and Conception be better remembered than the obscure or confused, the reason probably is, because they are more interesting, more full of feeling, than the latter. As phenomena of pure intelligence, Perception and Conception are themselves neutral, but they constantly rouse feeling, and according to the intensity of this, will be the faithfulness of the recollection.

4. The differences between one man and another, in regard to the faculty of Perception, are not very striking, except in the case of illness. The

most wide-spread diversity is that of long and short sight. In forming particular Conceptions of things formerly perceived, the power of all men is also pretty much on a par. With respect to general conceptions no doubt, it is otherwise. Still, upon the whole, the differences between one man and another, whether in the faculty of Perception or of Conception, are not sufficient to account for the very great diversity of memories; and therefore we must conclude that this diversity depends not so much upon the difference of those intellectual faculties as on the difference in the strength of the feelings which accompany them. Such is our *first* conclusion on this subject. In one form of Conception, indeed, men differ widely, namely, in the power of Imagination. Now, as this intellectual power has a peculiar influence on the emotions, so, agreeably to the above conclusion, what men imagine vividly, they should remember well; because, if they imagine vividly, they will feel warmly.

5. Neither does goodness of memory depend much, if at all, on soundness of judgment and strength of the reasoning powers; though some degree of Memory be essential to the exercise of these. It is evident that without Memory, Judgment and Reasoning could have nothing to go upon, no facts, no former conclusions, no premises; but it does not appear why judgment and reasoning should be necessary to Memory. And experience shows that persons very deficient in the higher intellectual

faculties have sometimes excellent memories. I have known boys, the least gifted in other respects, the best at learning by heart. This surely proves that memory depends little on judgment and reasoning power, even when all these are found together in perfection. Such is our *second* conclusion, which is corroborated by the fact that memory is generally strongest in the young, in those whose higher faculties have not come to maturity. The comparative readiness with which men confess a deficiency of memory may be admitted as a proof that, in popular belief, Memory does not depend upon judgment, or upon reasoning power, for assuredly they would not so easily allow an inferiority in these faculties.

6. As Memory arrives at maturity before the powers of judgment and reasoning, so it is apt to decline before them. We often hear people of middle age complain of weakness of Memory, and in after years it not unfrequently fails very much, while the higher faculties are still entire. The senses wax dull, the emotions languid, Memory becomes weak, before the Reason is affected. But the Senses, as we know, depend much upon the state of the body—of the eye, and ear, for instance, and no acuteness of mind in other respects can remedy an imperfection here. The emotions also depend, a good deal, upon the state of the body, on the slow or rapid flow of blood especially; and whatever retards or quickens the pulse, has a corresponding effect upon the emotions. Thus Digitalis or Foxglove, which lowers

the pulse, produces depression of spirits; while strong drink stimulates the circulation, and at the same time quickens the emotions, and is consequently in great request. It is not so much for the pleasure of Sense, that spirituous liquours, tobacco, and opium, are in demand, as for the agreeable emotions which they rouse. The state of the atmosphere also, and other physical causes, such as good or bad digestion, influence the emotions through the body. Now, as Memory seems to follow the law of the Senses and the Emotions, with respect to early development and maturity, and early decline, more than the higher intellectual faculties of judgment and reasoning, does it not seem probable that it also depends more upon the body than these? May we not say, that, in the scale which reaches from Matter to Mind, from Sense to pure Intellect, Memory occupies a middle place? that, though itself entirely mental, it has more connection with the tenement of day than pure reason? Such is our *third* conclusion upon this subject.

7. We have next to remark that the Will seems to have more power over the Memory than over any other intellectual faculty, more than over any mental faculty, except the emotive. Over the Senses, the Will has no power at all, no *immediate* power, none over the Perceptions, or the Conceptions, the Judgment, or the Reasoning faculty; and though it may have a *remote* influence upon all these, yet its power over the memory, though still indirect, seems

more considerable. Assuredly we cannot directly will the presence of anything in the mind; for, if it be there already, there is no occasion for willing it, and if not there, how can we will the presence of we know not what? Still there are innumerable helps to memory which people soon learn, when they wish to remember anything, numerous associations which they can establish, so as to suggest at the proper time the thought required. We have even systems of *memoria technica.* Memory is subject to the laws of Association, and by proper attention to these it may be not only assisted on particular occasions, but even permanently improved. Such is the *fourth* and last conclusion which we come to on this subject, a conclusion, moreover, confirmed by popular sentiment, which never blames a man for imperfection in the Senses, in Perception, Conception, Judgment, or Reasoning, but often upbraids him with forgetfulness. "I forget," is not always admitted as a valid excuse; the answer being "Aye, but you *ought* to remember."

8. An important corollary is derived at once from the foregoing. If Memory be more under the controul of the Will than any other intellectual faculty, nay, than any other mental faculty, except the emotive, then, with this exception, the Memory ought to be the most susceptible of improvement. Therefore improvement of memory is an object not only desirable but attainable. How then shall we best secure this end?

9. Since Memory depends so much on the strength of the original impression, especially on the degree of feeling which accompanies it, our principal object ought to be to cherish that feeling. To this of course ATTENTION is indispensable. When the mind is altogether absent, nothing can make impression, and when it is distracted by many things, each rouses but a feeble and transitory feeling. Attention, then, is essential, and concentration upon one subject for a length of time beneficial to memory; while absence of mind is fatal, and rapid transition from one subject to another injurious. Except total inattention, nothing is so bad for memory as volatility, nothing so good as steadiness of mind. Hence relaxation after study is better for memory than a change of intellectual pursuit, and sleep, the greatest relaxation, best of all. Accordingly, it may be observed that what one has learnt at night, immediately before going to bed, is often well remembered in the morning, sometimes better remembered than the night before. It used to surprise me, when at school, how well I recollected lines on first awaking which I knew but imperfectly before I slept.

10. Since the capacity of the mind is limited, and we cannot remember everything, no inconsiderable part of the Art of Memory consists in proper selection, in knowing what we ought to remember, and what forget. When stupid people begin to relate any event, they generally inter-

lard their story with so many unimportant particulars, like Mrs. Quickly,[1] that the point of the whole is blunted or destroyed; and the mind, being filled with such insignificant details, forgets others of greater moment. Mere contiguity in place and time may afford innumerable associations, but few of any importance; and all that are trivial ought to be forgotten, in order that we may better retain the others. Relations of Causation and of Resemblance afford the most useful associations, and to them therefore our principal attention should be directed. Thus we see that the Art of Remembering includes the Art of Forgetting.

11. If we could but stimulate the emotions generally, we should certainly improve the Memory: But how can this be brought about? Though nature has made a great diversity between one man and another with respect to Sensibility, yet education and circumstances may greatly modify original temperament. Thus monotony impairs,

[1] "Thou did'st swear to me upon a parcel-gilt goblet, sitting in my Dolphin chamber, at the round table, by a sea-coal fire, upon Wednesday, in Witsun week, when the prince broke thy head for liking his father to a singing-man of Windsor, thou did'st swear to me then, as I was washing thy wound, to marry me, and make me my lady, thy wife." King Henry IV. Part II. Act II. Scene I. Here we have a precious specimen of unimportant associations derived from mere contiguity in place and time, surrounding and almost burying the main idea.

variety quickens Sensibility. So Society, intercourse with one's fellows, keeps the feelings alive, while Solitude and Retirement deaden the flow of emotion. In advanced age especially, nothing is so injurious to the memory as Solitude. At that period of life, the Emotions naturally flag, the Senses fail, and with these the Memory goes, unless it be refreshed by continual intercourse, by cheerful faces, and animated talk, particularly by contact with infancy and youth. Youth and age form a great contrast, and like most contrasts, benefit each other. Where, on the other hand, none but old people meet together, as in hospitals and workhouses, the effect is very depressing. Anything, however, is better for Age than Solitude. A life of Activity, which stimulates all the faculties, is particularly favourable to Memory, by maintaining a perpetual flow of emotion. Hopes and fears, success and failure, triumph and disappointment, are all full of feeling, whether pleasurable or painful, and pleasure and pain are alike conducive to memory.

How much memory depends upon emotion, will abundantly appear from the case of dreams. What more unreal than dreams? There the Senses and Perception are dead, Conception is often monstrous, Judgment and Reasoning power are perverted; yet Emotion lives, ay often flourishes more than in our waking hours. Accordingly, in spite of their absurdity, in spite of their rapi-

dity, in spite of their non-recurrence, there are dreams which we never forget.

12. Every faculty, bodily as well as mental, is improved by Exercise; and Memory especially. Now nothing is better adapted for this purpose than the study of languages, and as Memory is sooner developed than judgment and reasoning power, therefore, this study is peculiarly fitted for youth. It draws out and strengthens that faculty at the natural time. For Philosophy and the higher branches of Science, the youthful mind is not yet prepared; and no science so much improves the memory as languages. After languages comes History, which both requires and strengthens the memory, without any strain upon the higher intellectual powers. Chronology, of course, is an essential part of history. Here the influence of Association is very striking. When dates are learnt by rote merely, as by some system of technical memory, the labour is irksome, the profit small, the knowledge, such as it is, fleeting; but when associated with the facts, the fact will recall the date, or the date the fact. Thus were a person asked when Egbert lived, who united the Heptarchy, he might not at once remember; but recollecting that he was brought up at the Court of Charlemagne, he would require only to know the age of the latter. So, the fact that Haroun-el-Raschid sent a clock as a present to Charlemagne, fixes the reign of the renowned Caliph of

Bagdad. Thus does one date determine two others. The constitution of the human mind, and the order of the development of the faculties, as we now see, justify the practice of training youth by means of Languages and History, rather than Science. Were we to change the system, as some propose, and take up Science in preference, we should strain the higher faculties too much before they were duly prepared, and we should neglect Memory at the very time when it is most susceptible of improvement. It cannot be too frequently repeated that the object of Education, properly so called, is not so much Information as Intellectual progress. There is more mental improvement in making out hard passages in a Greek or Latin Author than in getting up all the known facts of the planetary system. The study of languages has this advantage, that, beginning with Memory, it afterwards requires the exercise of higher powers. In the choice of languages, for the purposes of Education, the dead languages, Greek and Latin, or the Oriental languages, particularly Arabic and Sanscrit, offer great advantages to us over those of modern Europe; first, because they differ more from our own; secondly, because they are more difficult; and thirdly, because, if not acquired in youth, the dead languages at least, they never will be learnt at all. We ought to secure in early life what in after years we may have no leisure to pursue. The rising importance

of our Indian possessions, and the system of public competition for civil appointments in India now happily adopted, will tend to encourage the study of the Oriental languages and literature; and an excellent study it will be, not only for a special purpose, but also for general improvement.

13. Why is verse more easily learnt by heart than prose? Because we know beforehand what Rhythm is, and this knowledge helps us to remember the words which fall into metre. Instead of two associations only, of sound and sense, we have three, sound, sense, and measure. Rhyme, of course, is an additional help, for, if we know the end of one line, we partially know the end of the next, we know the sound thereof. *Partial foreknowledge* is therefore a great help to memory.

14. Every one knows how difficult it is to learn off by heart words which we do not understand. In this case, the only association is that of contiguous Sounds, and that alone is trifling. Add to the Sound, Sense, and then we have two associations, the latter very important. To these add Measure, and we have three associations, the last of a constant nature, and therefore well-known before-hand. Again, add Rhyme, and we have now four associations, that of Rhyme being derived from similarity, not from mere contiguity, of Sounds, and therefore far more serviceable. Thus, the more associations we can form, the more easy

it becomes to remember. The Art of Memory might be called the Art of Association.

Since, as we have seen reason to believe, Memory depends more upon the state of the body than the higher intellectual faculties, it ought to be sooner impaired by disease. And this seems confirmed by Experience. Good health and good spirits, useful to all the faculties, are particularly beneficial to Memory.

CHAPTER VI.

OF REASON IN GENERAL. DISTINCTION BETWEEN REASON AND SIMPLE INTELLECT.

1. Hitherto we have treated of those Intellectual faculties which properly belong to SIMPLE INTELLECT; now we come to those which appertain especially to the REASON. Under the former we include all those Intellectual faculties which consider objects singly, without reference to their relations; while, under the latter, we class those which look to the Relations of Things. Thus, Perception, Conception, Memory, belong to Simple Intellect; Comprehension, Judgment, and Reasoning power, to the Reason.

2. We are aware that this distinction has not been always observed. Thomas Brown's division of the Intellectual faculties, however, into Simple and Relative Suggestion, is fundamentally the same as the above; and Dugald Stewart treats of "Reason or the Understanding properly so called," in the Second part of his "Elements." Locke, on the other hand, under the name *Under-*

standing includes all the Intellectual faculties, and this may be considered the usual meaning of the word, as in the old division of the mental powers, into the Understanding and the Will. The above distinction, however, is real and important, whatever terms we may employ to mark it; and as the English language affords no single word under which we may include all the Intellectual faculties, other than Reason, I shall make use of the terms *Simple Intellect* to signify the former. The phrase appears to be appropriate, as expressing that simple point of view under which the mind contemplates Objects as opposed to the more complex view embraced by *Reason*, which considers objects not singly, but with their relations to other objects.

3. It is self-evident that Reason cannot exist without Simple Intellect; for we cannot know the relations of one thing to another without perceiving, conceiving, or remembering the separate things so related. We cannot compare one tree or one horse with another, without having some notion of each separate tree, or horse. But simple Intellect can exist without Reason; at least it may be contemplated as so existing, though, in reality, the one be rarely found altogether without the other. We seldom consider any thing entirely by itself, without relation to something else. By the power of association, one thing constantly suggests another, and thence arises comparison.

If, however, Simple Intellect do not necessarily suppose Reason, the distinction between them is real, and ought not to be neglected in analysing the Intellectual faculties. In nature, the metal Potassium is always found united with Oxygen in the alkali Potash; but chemical analysis can separate the two elements.

4. It may be true that almost all objects in nature bear some relation to each other; but that is nothing to the present purpose, unless the relation itself be a subject of mental contemplation. There is a certain relation between Matter and Mind, whereby the one acts upon the other; but, in looking at a rose, the object alone in general engrosses me, and I have no thought about the relation subsisting between it and myself. That thought may occur to the metaphysician, but certainly not to the ordinary observer, the mere lover of flowers. Therefore, we conclude that there may be Perception, there may be Simple Intellect, without Reason.

5. To this, however, it may be objected, that as no material object is strictly one and indivisible, we cannot contemplate anything outwardly without being conscious of some relation between the parts. This consciousness, however, requires some advancement of intellect. The child views objects in the gross, and cannot analyse and afterwards compare. I knew a deaf and dumb boy of six years old, whose education had been totally

neglected, who seemed to have great difficulty in distinguishing the different parts of his own body. To himself he appeared all one. And though we should grant that some obvious relations of position and magnitude might be known by simple Intellect, yet this would prove not that the distinction between Reason and Simple Intellect was unfounded, but only, that things are not so well defined in nature as in our classifications. It is a great mistake, and the source of much error, to attempt to overthrow distinctions, because their limits cannot be stated with perfect accuracy.

6. This distinction between Simple Intellect and Reason, though not strictly observed by philosophers, seems to me warranted by the common use of language. Vulgar notions in metaphysics, as signified by ordinary speech, are not likely to be without some good foundation, for all men are, and cannot help being, to a certain extent, metaphysicians. Our Sensations, Emotions, and Thoughts, for ever present to us, must be in some degree known. Now it appears to me that Perception, Conception, and Memory, are generally distinguished from Reason, though the common name of Simple Intellect may not be given to the three former. With this popular consent, confirming the distinction, I shall rest satisfied.

CHAPTER VII.

OF COMPREHENSION.

1. The first power that belongs to the Reason is that of COMPREHENSION. Here again we must beg attention to a new or at least to a more exact sense of the word. Indeed it would be difficult to say what meaning has hitherto been given to this term; or to point out any author who has always used it in the sense here proposed. Comprehension, as here employed, is often confounded with Conception, but as I think improperly; for Conception should be limited to the notion of single objects, and should not embrace Relation. On the other hand, Comprehension differs from Judgment; for I consider it certain that we can comprehend a Relation without passing any judgment as to its truth or falsehood. When I am told in Euclid that the angles at the base of an isosceles triangle are equal, I may or may not comprehend the proposition, according as I know or do not know the meaning of the words, angle, triangle, and isosceles; and when I do comprehend it, I still cannot be convinced of its truth until I have studied the proof. Then, and then only, do I pass judgment

upon it. The same may be said of all the enunciatory propositions of Geometry. To comprehend them is one thing, to determine their truth or falshood another; and so with respect to other propositions. I can comprehend the proposition that "the Danube is a larger river than the Volga," though I do not pretend to judge whether it be so or not. Thus is Comprehension distinguished from Conception on the one hand, and from Judgment on the other, inasmuch as it supposes the consciousness of relation without the knowledge of truth. It is the first and lowest of the powers of Reason; first in the order of mental developement, for we must comprehend what a relation or a proposition is before we can judge of it; lowest, because common to all, and indispensable to all reasonable creatures.

2. The establishment of Comprehension as a distinct mental faculty seems to me of considerable importance, necessary to a due appreciation of the Intellectual powers. To the want of this distinction may be attributed much obscurity and even contradiction in the writings of mental philosophers. Thus Reid allows in one part that "when simple apprehension is employed about a proposition, every man knows that it is one thing to apprehend (comprehend) a proposition, that is to conceive what it means; but it is quite another thing to judge it to be true or false.[1]" Here the words *apprehend* and *conceive* are used instead of

[1] Intellectual Powers. Essay VI. Chap. I.

comprehend, which I propose, but the sense is the same, and the doctrine the same as that given above. But not many sentences after we meet with the following: "Relations of things make one great class of our notions or ideas, and we cannot have the idea of any relation without some exercise of judgment?[k]" Now, as Reid would allow, and indeed every one allows, that a proposition supposes a relation; it follows that in the first sentence he grants, and in the next denies that we can *conceive* or *apprehend,* as he expresses it, a relation without an exercise of judgment. Here is a flat contradiction. Both of these statements cannot be true; and the former I believe to be correct, as above shown. Had Reid seen that there is a power, which I call *comprehension,* distinct from Conception or apprehension proper, as well as from Judgment, he could not have fallen into this contradiction. In the third chapter of the same Essay he again allows explicitly that "a proposition may be simply conceived (comprehended) without judging of it," and if a proposition, then a relation; for a proposition is simply a relation expressed in words.[l] And again, in the beginning

[k] Intellectual Powers. Essay VI. Chap. I.

[l] There may be an exception to this metaphysical definition of a proposition, in the case where Identity, or where simple Existence, is predicated; but in almost all propositions, if not in all, some Relation is affirmed or denied. On this point see the author's "Introduction to Mental Philosophy" Article, PROPOSITION.

of the fourth chapter we are told that some propositions are of such a nature that a man of ripe understanding may apprehend them distinctly, and perfectly understand their meaning, without finding himself under any necessity of believing them to be true or false, probable or improbable." Substitute the word *comprehend* for *apprehend* and *understand*, and this statement will agree with my own.

CHAPTER VIII.

OF BELIEF.

1. When we fully *comprehend* a Proposition, the next step is to *believe* or to *disbelieve* it. Some propositions we believe or disbelieve at once, without any hesitation; others we admit or reject slowly, after some mental effort; on others we make up our mind with great difficulty; while of a few we may never be fully convinced, one way or another, during the whole course of our lives. Let us first determine what Belief is, and then see how it is connected with the other Intellectual powers.

2. When I say that I believe in God, it is evident that the Belief is something different from the mere conception of a Supreme Being, Maker of heaven and earth, for an Atheist can conceive such a Being, though he does not believe in him. It is also clear that when I affirm my belief in the proposition "God exists," I do something more than state that I comprehend it; for an Atheist comprehends this proposition, or knows its meaning, as well as myself, without any mixture of Belief. Therefore Belief differs essentially from mere conception, as well as from mere comprehension; though with-

out conception and comprehension of course we cannot believe. They are indispensable to Belief, but may exist without it.

3. These observations are sufficient to refute the statement of Hume delivered in his juvenile work; "A Treatise of Human Nature," namely, that "An opinion or belief is a lively Idea related to, or associated with, a present Impression." [m] Here, Belief is confounded with Conception. It is nothing but a lively Conception, or in Hume's language, a lively Idea. This conclusion follows from that one fundamental assumption with which the work sets out, that all the phenomena of mind are but of two sorts, Impressions and Ideas, the latter being only copies, as it were, of the former, diminished in force and vivacity. But having already criticised this assumption, I refer to it here again only to show that it gave rise to an erroneous notion of Belief. If all the mental phenomena be either Impressions or Ideas, of course Belief must be one or the other; and not being an Impression, it must be an Idea. But we have shown that it is essentially different from an Idea or Conception; and consequently, Hume's primary classification of the mental phenomena is narrow and insufficient. Further on, in the same Treatise, Hume seems to consider Belief as an Impresssion, rather than an Idea; for he says, "Belief is more properly an act of the Sensitive

[m] Part III. Sect. 7.

than of the Cogitative part of our nature."[n] Here Belief is confounded with Sensation; wretched Metaphysics! The force of absurdity can no further go.

4. So far we have seen what Belief is not; but as yet we know not what it is. Does it belong to Simple Intellect or to Reason? We have shown that certain powers of Simple Intellect, such as Perception and Memory, comprise Belief, belief in the present existence of the outward object, belief in the former existence of something now recalled: and every one allows that there is Belief in Judgment. It therefore seems that Belief belongs to both Simple Intellect and Reason.

5. But, does the Belief which forms part of Perception and Memory suppose an act of Judgment? If so, then Simple Intellect and Reason are both united in these complex mental faculties, and they cannot be attributed to the former alone. In order to solve this question, we must first inquire whether Belief be in any case possible without Judgment.

6. Some writers are of opinion that we cannot affirm or deny anything without an exercise of Judgment. Thus, Dr. Watts says, "Judgment is

[n] Part IV. Sect. 1.—It must always be remembered, that the "Treatise of Human Nature" was a youthful work, afterwards given up by the Author; but it was printed and published, and therefore may be criticised, especially if such criticism throw a light upon mental pbilosophy.

that operation of the mind whereby we join two or more ideas together by one affirmation or negation; that is, we either affirm or deny *this* to be *that*. So, *the tree is high; that horse is not swift; the mind of man is a thinking being; mere matter has no thought belonging to it; God is just; good men are often miserable in this world; a righteous governor will make a difference between the evil and the good*; which sentences are the effect of Judgment, and are called *Propositions*."[o] And again, further on, "*the evidence of sense* is when we frame a proposition according to the dictates of any of our senses; so we judge that *grass is green;* that *a trumpet gives a pleasant sound;* that *fire burns wood; water is soft*, and *iron is hard:* for we have seen, heard, or felt all these."[p]

7. Other writers seem to be of a different opinion. The statements of Dr. Reid on this point are not always consistent, but in the opening of his Essay "Of Judgment," he finds fault with the definition given of judgment by the more ancient writers on logic, as *an act of the mind whereby one thing is affirmed or denied of another:* and that on two grounds; first, because it does not seem to embrace mere *mental* affirmation and denial; and secondly, because "affirmation and denial is very often the expression of testimony, which is a different act of

[o] Logic, Introduction.

[p] Id. Part II. Chap. II. Sect. 9.

the mind, and ought to be distinguished from judgment. A judge asks of a witness what he knows of such a matter to which he was an eye or ear witness. He answers by affirming and denying something. But his answer does not express his judgment; it is his testimony. Again, I ask a man his opinion in a matter of science or criticism. His answer is not testimony; it is the expression of his judgment." Here it is distinctly allowed that there may be affirmation and denial, and consequently affirmative and negative propositions, without an act of judgment, and therefore Belief. Yet, in the very same place we are told that "mental affirmation and denial is only another name for judgment," which is a flat contradiction to the above. This latter assertion, however, is not supported by any argument or illustration, and seems to have been a mere oversight, contradicted by what immediately follows.

8. In order to decide this point let us take the simplest case possible. I knock my hand against the table, and what is the mental result? First, I feel a sensation, which may or may not amount to pain; then I have a conception of some material object; and lastly, I believe in the existence of such an object there present. Now in all this what room is there for judgmeut? The sensation, the conception, and the belief, are all of which I am conscious. But no one would maintain that the sensation or the conception singly or together constitute judgment; nor will it, I think, be affirmed that Belief

is only another name for Judgment. These words are distinguished in all languages, and therefore the states of mind which they express cannot be quite the same. But it may be said that Conception and Belief together constitute Judgment. This, however, is only to repeat the assertion in another form, that Belief and Judgment are identical, for neither Belief nor Judgment can exist without Conception, and therefore in this there is no difference between them. If Conception and Belief together constitute Judgment, and Conception be a part of Judgment, then is Belief without Conception equivalent to Judgment without Conception, and consequently Belief with Conception is the same as Judgment with Conception, and therefore Belief and Judgment are identical. But this conclusion is at variance with the universal sense of mankind, and therefore cannot be true. Consequently, the Premises from which we set out that Conception and Belief together constitute Judgment, must be false.

9. Having thus exhausted all the combinations of the three elements, Sensation, Conception, and Belief, as occurring in the case just stated, and having found nothing in them singly or in union that would be called Judgment by any man of common intelligence, we conclude that Belief may exist without Judgment. And if in that case, then in others innumerable. This is an important conclusion.

10. The Belief which exists along with our

Perceptions is very frequently unaccompanied with Judgment. It seems ridiculous to assert that without an exercise of Judgment we cannot know that "grass is green." Indeed, far from an effort of Judgment being required to unite the attribute of greenness to grass, we can scarcely separate them even in Conception. And surely it will not be maintained that the formal statement of the fact in words as a proposition can require Judgment, if the mental conviction required none.

11. But the Belief which attends upon Perception sometimes does require an act of Judgment. This is particularly the case with the Perceptions of Sight. These, as we know, are often acquired, not instinctive; and much judgment may be necessary, even in mature life, to determine the exact distance, position, magnitude, or figure of remote objects, as descried by the eye. In these particulars people continually differ, that is, they form different opinions, and this diversity is the strongest proof that judgment is necessary; whereas in such statements as *marble is hard, grass is green*, there is perfect unanimity, because there is no exercise of Judgment. Instinct is the same in all; but Judgment varies indefinitely. Travellers in a new country often differ as to the distance of the objects which present themselves, but they never debate whether the trees have leaves, or the rivers flow. Are you a good judge of distances by the eye? is a com-

mon question and expressive of a truth; but no one would ask another whether he were a good judge of the colour of grass.

12. The knowledge derived from the sense of Hearing also often requires an exercise of Judgment. To be able to tell whence any noise proceeds, from what cause, and from how far, may demand considerable experience and employment of the rational faculties; but no judgment is necessary in order to tell whether a sound be agreeable or disagreeable. We do not *judge,* but *feel* it to be one or the other, at the time; and ever afterwards we *believe* that a similar sound will affect us in like manner. Having felt how the sawing of stone grates upon the ear, we can surely frame a proposition to express our belief in this truth, without any act of Judgment.

13. What has been said of Perception also applies to Memory. Common Sense makes a broad distinction between Memory and Judgment; and a person may excel in the one and be very deficient in the other. Judgment, indeed, cannot flourish without some degree of Memory; but Memory may exist and even abound without Judgment. I should like to know what Judgment is required in order to learn off by heart a piece of prose or poetry. And can I not affirm that "I yesterday walked five miles into the country" without an exercise of that faculty? If I can, then the Belief, which forms an essential part of Memory, is inde-

pendent of Judgment. Will any one maintain that the same mental principle is required to frame these two propositions—"last month I frequently skated on the Serpentine," and, "Napoleon was a more skilful general than Mack."

14. From the above it appears that Belief is frequently unaccompanied with Judgment, especially in the case of Perception and of Memory. Consequently, in these cases Belief belongs to Simple Intellect, not to Reason. In other cases, indeed, Belief is closely connected with Reason, as in Judgment: but, if Belief can exist without Judgment, without any act of Reason, then it is properly a phenomenon of Simple Intellect. It is a phenomenon *sui generis*, neither a Sensation, nor an Emotion, nor a Perception, though an element thereof, nor a Conception, nor even a Relation; for a relation may be comprehended without being believed. It is a phenomenon which cannot be defined, because it cannot be analysed, nor for the same reason described. In fact, we know it so well that neither definition nor description are necessary. All that is required is to find what place it occupies, and what combinations it forms with other mental phenomena; and this we have endeavoured in part to do. We shall afterwards consider it in union with the Judgment.

15. But if Belief be ever independent of the Judgment on what does it depend? To this we

answer that Belief is of two kinds, *Original* or *Instinctive*, and *Derived* or *Acquired*; that the former is an ultimate or unaccountable fact, an original part of our mental constitution, which cannot be traced any farther; while the latter depends upon causes that may be investigated.

16. We have already mentioned some of those Articles of Belief which we consider as *Original* and *fundamental*, the ground of all subsequent knowledge; but we shall again enumerate them here. These then, are the following:—

1. Belief in our own Identity.
2. Belief in the evidence of Memory.
3. Belief in the existence of the material world.
4. Belief in the uniformity of Nature, in uniformities of Co-existence as well as those of Succession; for instance, that all cows, horses, sheep, bears, lions, etc., are respectively formed alike, not only outwardly and visibly, but inwardly and out of sight; and that fire will always burn, water always drown, etc., etc.
5. Belief in human Testimony.

All these, and possibly others, we consider as Original and fundamental Articles of Belief.

17. Hume, no doubt, has attempted to prove that our Belief in the uniformity of the course of Nature, or in Causation, is derived from Custom.[q]

[q] Essays: Sceptical Doubts; and Sceptical solution of those doubts.

but this explanation is refuted by the fact that such Belief requires no Repetition. When a child has once burned his finger in the candle, he will avoid it ever afterwards; and if he have seen a man drowned in water, he will not require a repetion of the experiment to be sure that it will drown himself. In truth, the tendency to associate phenomena as cause and effect is so strong, that it leads to frequent error, to be corrected only by subsequent experience. Repetition, then, is necessary not to give the first Belief, but to confirm or dispel it. The same may be said of Belief in human testimony. The child swallows implicitly all that is told him by those around him. He never doubts the truth of what they say, until experience have proved to him that they may sometimes speak false. Here again Repetition gives not the first Belief, but afterwards serves to correct it. There is, however, this difference between Belief in the uniformity of Nature, and Belief in man's word, that the former is based upon one instance at least of succession or of co-existence, whereas the latter seems to be independent of all experience as to the truth or falsehood of what men say. The child believes what he is told, long before he can prove anything, prior to all experience, quite instinctively. Mr. Mill, on the other hand, endeavours to prove that our belief in the law of Causality does not depend upon an instinct, but on an induction by simple

enumeration.[r] But here the whole difficulty is overlooked. In the first place, a number of instances is not necessary to this belief, one only may suffice; but one instance, nay, ten millions of instances of any event, show only a certain uniformity in time past or present; they can prove no such uniformity in time to come. No doubt, we cannot help believing in the future uniformity; but there is no logical connection between the premises and the conclusion. Why should the future be like the past or the present? Is this a self-evident truth? Certainly not? Can any reason be assigned for it? We maintain not; and therefore we conclude that our belief in Causation is not the result of reasoning, is not acquired by induction, but is prior to all reasoning, to all induction, and truly instinctive. Hume saw the difficulty, and attempted to solve it by Custom; but I cannot see that Mr. Mill has given any solution at all. He says indeed that "The justification of our Belief that the future will resemble the past, is that the future *does* resemble the past." But the word *future* in the second place must mean the present as future to the past; and how past and present uniformity can prove uniformity in time to come is still the difficulty.

18. The above, and some other fundamental articles of Belief, are called by Dr. Reid "First

[r] "System of Logic." Book iii. Chap xxi.

Principles of Contingent Truth," and are treated of by him under the head of "Judgment." But we have seen that they are independent of this faculty. They arise very early in the infant mind, long before judgment is developed; and it is necessary that they should, for the very existence of the child depends upon them. Miserable indeed would be the lot of mankind, if Belief could only follow upon Judgment! Judgment may indeed be required afterwards to generalise these primary convictions, to state them in formal propositions, and bring them forward as First Principles; but the Belief existed long before; it arose on each particular occasion, as a particular phenomenon, not formally stated, not expressed in words, but entirely mental. On what occasions the particular instances of Belief may arise, we have already seen, and there is no uncertainty here; but the occasion is not the principal cause, it is only an auxiliary. For the principal cause we can look only to the original constitution of the human mind, which, like the bud of a plant, is susceptible of such wonderful development. The sun, the rain, are but auxiliary causes of the growth of the branch, the leaves, the flower, the fruit; the principal cause is in the bud itself. Perhaps the most convincing instance of Belief, independent of all Experience, of Judgment, of Reason, is afforded by the child's easy confidence in what is told him.

19. The second sort of Belief is that which is not original or instinctive, but derived or acquired; and of this therefore the causes may be assigned. One cause of such Belief is unquestionably the Judgment; but is it the only cause? Is it from an act of Judgment alone that the mass of mankind derive all those opinions which are not original or instinctive? It is far otherwise.

20. Many opinions are adopted by children of tender age before the Judgment is developed; many are believed implicitly from infancy to age without question, without doubt; many seem to be hereditary, descending from father to son, like the paternal acres; many are common to classes of men, nay to whole nations. Such early, such uniform belief, about things often questionable, argues some cause acting sooner in life, and acting with greater steadiness than the Judgment. Wherever Judgment comes in, there we find diversity of belief at once. This is well known to the Church of Rome; and therefore the prohibition of private Judgment in religious matters is the fundamental article of that church, distinguishing it from every variety of Protestantism. All Protestants, of whatsoever sect, appeal to private Judgment; some more, some less, some deferring much to authority, others very little; but the Church of Rome rejects private judgment altogether. The consequence is what we see; that while the Church of Rome has held together for

good or for ill, Protestantism has been split into innumerable sects. Even Protestant churches, ostensibly one, are sometimes almost as much divided among themselves as those which assume different denominations. Such is the consequence of the acknowledged right of private judgment, its use and its abuse.

21. Whence then are derived those early, those uniform opinions to which we have alluded? We answer, without hesitation, from CUSTOM. We have seen that when Hume explained our belief in Causation by Custom, he certainly was mistaken; because such primary belief requires no repetition of phenomena, no custom; but as a cause of secondary Belief, custom is of immense importance. It is a well-known fact, that persons of mature age, even thoughtful men, insensibly imbibe the opinions of those with whom they constantly converse; much more children, boys, and unreflecting adults. We cannot blink the fact that the immense majority of mankind, in all countries, derive their religious opinions from custom. Why are all Englishmen Christians, all Turks Mahometans? In fact, the Christian religion is the only one which appeals to the Judgment, the only one that has evidences; and to how few, comparatively, are those evidences known! Though religious sentiment in general be deeply founded in human nature, yet, in all religions but the Christian, Belief in the prevail-

ing creed is founded on nothing but custom; in all very young Christians, and in most adults, it depends upon the same principle; in a few only it rests upon sound judgment and reasoning.

22. And fortunate for us is this law of our nature. Custom, indeed, may inculcate falsehood as well as truth; if it spread Christianity in England, it keeps up Mahometanism in Turkey; but perhaps any religion, certainly the Mahometan, is better than none; and any fixed belief, not decidedly immoral, is preferable to a blank, or to a tumult of conflicting opinions. Without the influence of custom there could be no family, except in a material sense, and no nation; for a nation consists not merely in a geographical division of country, and a number of people in that country, but in a people among whom there exists a certain harmony of opinions, tastes, and character. It is custom that binds the nation, like the family, into one; whereas private judgment tends to separate the members, and sometimes widely separates them. In short, without custom the world would be a Babel; without the exercise of judgment, an uniform, dead, unchangeable mass.

CHAPTER IX.

OF JUDGMENT.

1. The great antagonists to Belief founded on mere custom are Judgment and Reasoning. These, though so nearly related, and so commonly united, are not inseparable by Metaphysical analysis, not even in reality, for though there can be no Reasoning without Judgment, there may be Judgment without Reasoning. But to determine what Judgment properly is would seem to be no easy task, considering the various and even contradictory opinions of metaphysicians on this subject. These discrepancies may be partly verbal, different authors giving different meanings to the same word; but the result, if not absolute error, is confusion. A writer cannot force all men to his sense of any word, but he ought at least to explain clearly his own meaning, to adhere to it consistently, and to depart as little as possible from the common use of language.

2. Locke's account of this matter is summed up by himself as follows: "Thus the mind has two faculties conversant about Truth and Falsehood. First, *Knowledge*, whereby it certainly

perceives and is undoubtedly satisfied of the agreement or disagreement of any ideas Secondly, *Judgment*, which is the putting ideas together or separating them from one another in the mind, when the certain agreement or disagreement is not perceived but presumed to be so; which is, as the word imports, taken to be so, before it certainly appears. And if it so unites, or separates them as in reality things are, it is *right Judgment*."[1]

3. What first strikes us in the above account is the singular use of the word *Knowledge*, being employed to mean a mental faculty, and not as in common language a result obtained by means of our faculties. Next we observe the distinction attempted between the faculty whereby we discern certainty and that by which we descry probability only, the latter alone being called *Judgment*. Such, in short, is the doctrine of Locke. It is a doctrine, as we see, that *limits* rather than *extends* the meaning of the word Judgment, beyond what is usual.

4. Dr. Reid says, "That I may avoid disputes about the meaning of words, I wish the reader to understand that I give the name of Judgment to every *determination of the mind concerning what is true and what is false*. This, I think, is what logicians, from the days of Aristotle, have called Judg-

[1] Essay concerning Human Understanding. Book IV. Chap. 14.

ment."[t] He also states that "in persons come to years of understanding, judgment necessarily accompanies all sensation, perception by the senses, consciousness, and memory, but not conception." In short, according to Reid, wherever there is Belief, there is Judgment; and he even supposes Belief, as in the case of sensation and simple consciousness, where there is none. Here, Judgment is used in the most extensive possible sense; and as I have endeavoured to show in the preceding chapter, quite improperly. But, in the opening of the same chapter, he finds fault with the usual definition, there expressed as *an act of the mind whereby one thing is affirmed and denied of another*, although he adopts it, observing that "affirmation and denial is very often the expression of testimony, which is a different act of the mind, and ought to be distinguished from Judgment." But I cannot testify that "I yesterday saw George Roberts in the town Coventry, at five o'clock in the afternoon," without a conviction in my mind that what I testify is true, or false, and therefore, according to Reid's own showing, without an act of judgment. Nay, the very statement, "I yesterday saw," etc., expresses my belief or conviction, and therefore again, according to Reid, my judgment. But this statement may be false, what then? why in that case I must disbelieve what I assert, and disbelief surely argues judgment as much as

[t] Intellectual Powers. Essay VI. Chap. I.

belief. The two statements of Reid are therefore contradictory, and this contradiction may be traced to the too extensive sense given to the term Judgment, an extension not in accordance with common notions and common language. It is quite true, as Reid says, that there is a real distinction, and one generally allowed, between affirmation and denial expressive of testimony, and affirmation and denial expressive of opinion; in other words, between simple Belief and belief founded on Judgment.

5. As this is a matter of importance, I shall bring forward two more passages to prove that simple Belief and Belief founded on Judgment, though distinguished by Reid at the outset, are afterwards confounded by him. In the first Chapter of his Essay on Judgment, after stating that "in persons come to years of understanding, judgment necessarily accompanies all sensation, perception by the senses, consciousness, and memory, but not conception," he adds, "I restrict this to persons come to the years of understanding, because it may be a question whether infants, in the first period of life, have any judgment or belief at all." Here judgment and belief are expressly used as synonimous. Again, in the Third Chapter of the same Essay he says, "A proposition may be simply conceived (comprehended) without judging of it. But, when there is not only a conception (comprehension) of the proposition, but a mental affirmation or negation, an assent and

dissent of the understanding, whether weak or strong, that is judgment." Here again, assent or dissent of the understanding, in other words, Belief or Disbelief, and Judgment, are considered as one and the same.

6. Since Locke and Reid differ so widely in the notion attached by each to the term Judgment, of course they must differ in all their conclusions founded on such notions respectively. The objections brought forward by Reid against the doctrine of Locke are consequently verbal; they are objections not so much to a particular doctrine, as to the particular use of a certain word. I shall therefore not trouble the reader with them.

7. In common language, the term Judgment is assuredly employed with considerable latitude and vagueness; but, as we have seen, it is not generally confounded with simple Belief. Very frequently it embraces Reasoning as well as Judgment proper. When we talk of a man of sound Judgment, we mean one who reasons well and comes to sound conclusions on all affairs of ordinary life. Having shown therefore, on the one hand, that Judgment is not mere Belief, we ought to prove, on the other, that there is a faculty called with propriety *Judgment*, the foundation of Reasoning, but distinguishable from Reasoning, and capable of existing without it.

8. When I give my assent to the propositions, twice two are equal to four, three times five are

equal to fifteen; things which are equal to the same are equal to one another; two straight lines cannot enclose a space; etc., etc., what faculty of the mind is called into exercise? I certainly believe these propositions; but is belief all? Is my state of mind the same as when I say that I believe that the sun will rise to-morrow? Certainly not. But perhaps there is a difference only of degree, and I believe the one sort of proposition more firmly than the other. Neither is this true; for I am as certain in my own mind that the sun will rise to-morrow, as that twice two are equal to four, and I would act as unhesitatingly on the belief of the one, as on that of the other. There is then here a difference greater than that of mere degree; something is added to the belief in the one case which is not in the other. In the one case I believe, and only believe, when I state the proposition, for it does not appear to me at the time on what that belief is founded. I may amuse myself afterwards, if I please, by speculating upon this point; but at the moment the thought does not arise, and it may never arise. It is therefore beside the present question. The grounds of belief do not immediately appear. But in the other case, we believe because we see grounds of belief; we believe not only that the proposition is true, but we discern that it must be true; and this faculty whereby we so discern is what is properly called the Judgment. It comprehends belief, and

something more, and yet it does not embrace reasoning; for the truth of the proposition is self-evident, not proved by inference from something else. Thus it appears that at least one office of Judgment is to discern self-evident necessary truth.

9. The primary propositions which we have just considered are all *Mathematical*, having reference to Quantity alone, they are all abstract, and all independent of actual matter of fact. It must still be true that two straight lines (as we understand them) cannot enclose a space, whether there be any perfectly straight lines in nature or not.

But there are other primary propositions that may be called *Metaphysical*, which differ from the former, in this especially, that they do suppose matter of fact, or real existence, distinct from the conscious mind. These then are far more interesting and far more important than the other. The question which we have now to treat is, whether these be discerned by the Judgment.

10. The first of these which I shall mention is, that "whatever exists had a cause of existence distinct from itself." This is a proposition to which every man of sound mind assents at once, in a general way, without delay, without hesitation, but on what grounds? from reasoning, certainly not; for there are no premises from which it can be proved. Is it then self-evident and necessary? If so, then the contrary must be not only false, but impossible.

This we cannot venture to say. A single case of exception destroys impossibility; and, if we believe in God, we must admit that one exception. Therefore the truth is neither self-evident nor necessary. Is it then independent of Judgment? Assuredly we do not discern, though we cannot help believing it. Is it owing to custom? Custom may confirm the belief, but the rudiments thereof existed before custom had power to act, even from the dawn of Reason. Besides, Custom only associates phenomena, and from the presence of one phenomenon makes us look for another; but in this there is no notion of Causation. Therefore the truth in question is an early generalization of an instinctive and fundamental article of Belief, whereon Judgment and Reasoning afterwards build. We do not consider belief in this truth as *instinctive*, like Belief in our own identity, in the material world, and in the uniformity of Nature, out of which it springs; for it seems to arise later, and to require some Intellectual development, some degree of Reason, for its comprehension; but, as soon as comprehended, it is unhesitatingly embraced. Neither is it acquired by Experience, for the very notion of a Cause is not thus learnt, much less the necessity of a cause for everything. It must, therefore, be chiefly the growth of the mind itself, of the Intellect roused into activity by what it contemplates of the course of nature within and without.

11. If we vary the proposition and say that

"whatever had a *beginning* of existence must have had a cause thereof," then the proposition seems to approach nearer to the nature of a necessary one; though, even in this case, considering our deep ignorance of Causation, it would be too much to pronounce dogmatically that the contrary was impossible. No doubt, we must strain our minds to admit the possibility; but we can entertain the question; whereas we cannot for one moment allow the contrary of a mathematical axiom to be within the limits of possibility. We do not admit the old maxim *ex nihilo nihilum fit*, but it is almost as great a strain upon the intellect to believe in the creation of matter out of nothing, as to believe in its first existence without a cause; and if we allow the *possibility* of the one, we cannot dogmatically pronounce the *impossibility* of the other. This is all we contend for; in other words, that the proposition in question is not, like mathematical axioms, a self-evident necessary truth, but an instinct generalized, the eldest born of Reason, older even than the Judgment.

12. The third proposition which I shall mention under this head is, "that a certain order or arrangement in the effect is a certain proof of an intelligent and designing cause." Explain a steam-engine to an ignorant man, point out to him the uses of all the parts; and however low his intellect may be, if he be not an idiot, he will instantly conclude it to be the work of a thinking being. So,

the instances of order and arrangement in the works of nature, especially in the mind of man, point at once to an intelligent cause. Who could be so stupid as to think that mere matter, unthinking matter, might make a thinking soul? No proposition is more revolting to the Reason of man than this. If it be not absolutely impossible, it is desperately improbable, so that we reject it almost as unhesitatingly as that twice two are not equal to four. Still, speaking strictly, since with our limited knowledge we cannot dogmatically assert the contrary to be absolutely impossible, we must class this third proposition, like the two former, though all but certain, as neither self-evident nor necessary.

13. These observations go to refute the atheistical doctrine, that prior to experience anything may be the cause of anything. With respect to mere physical nature and isolated facts, this may be true; but not in reference to arranged and organized matter, still less to the mind of man. That anything could create order, that mere earth and water could form a regular plant with all its vessels, branches, leaves, flowers, and fruit; that stone and clay and moisture could give birth to a man, with his perfect physical organization, and his god-like mental faculties; these are absurdities almost self-evident, descried without the aid of experience, as soon as the terms of the propositions are understood. That such excessive improbabilities do not strictly amount to an impossibility, we must indeed, with due philosophi-

cal humility, admit; but, for all practical purposes, for all sane belief, a probability so opposed is worth a certainty.

Hume has ventured to start a doubt, whether instances of design in the works of nature be not too unlike those in the works of man to justify us in arguing from them in favour of an Intelligent cause of the Universe. But if the principles here stated be correct, no argument drawn from an analogy with man's works is necessary to prove a Diety. Design in the works of nature is all but self-evident, and a designing cause or Diety also evident to every man with an open mind, and free from the prejudices of false philosophy.[u]

14. This third proposition seems to me to differ from the two former however, first in the later development of the Belief which it implies; and secondly in this, that we truly *discern* that such a cause is necessary to such an effect. I certainly believe, nay I cannot help believing, that whatever exists had a cause; but I do not *see* the truth of this as I do that an orderly effect proves an Intelligent cause. This last belief then I attribute to the Judgment, and consider the proposition which embraces it as one of those which are all but self-evident.

15. We must not suppose that self-evident propositions only are discerned by the Judgment.

[u] See more on this subject above: Part II. Chap. II. Sect. Fourth. OF THE WILL.

On the contrary, by far the greater number of propositions so discerned are not strictly self-evident, or of themselves certain, beyond a doubt. Indeed, when the truth is very clear, many would doubt whether there were any exercise of Judgment at all. I see a small pony and a tall horse, side by side, and I instantly discern that the one is taller than the other. Is this, or is it not, an act of Judgment? Though I *perceive* the horse as well as the pony, yet I do not perceive the dissimilitude between them. The discernment of relation is beyond the power of Perception. But, though I certainly *believe* the dissimilitude, and that without a doubt, does this belief imply Judgment?

16. Suppose the pony to grow so as at last to reach within half-an-inch of the height of the horse. In that case it might require a practised eye, as we commonly say, in reality a practised judgment, to be able to discern at once which was the taller. This will be allowed; and if considerable judgment be required in such a case, on account of the smallness of the difference, surely a less degree of the same faculty will be necessary where the difference is greater. The degree of Judgment may be measured by the difficulty; but there may be judgment where no man of sound mind finds any difficulty, as in the case of self-evident propositions.

17. None of the intellectual faculties appears more susceptible of improvement than the Judgment. I, a man unused to such matters, take notice

of two bullocks, so nearly alike in size that I cannot say which is the heavier, while a practised grazier will tell at a glance. Nay, he will state to a nicety, and at the moment, the weight of each. Here we see the difference between a practised and an unpractised judgment, the original faculties being possibly on a par. Therefore as Belief is either *instinctive* or *acquired*, so is Judgment either *intuitive* or *cultivated.*

18. Here I cannot help remarking how misplaced is that contempt with which some men look down upon the intelligence of the rustic population. In their own line, and no man can excel in every line, they are far before those who despise them. They certainly cannot write Greek verses, or discuss philosophy, but they can judge well of the qualities of horses, and all cattle, the varieties of soil, and the processes of cultivation. This is no unimportant knowledge, and of it the mere bookworm is quite ignorant. In these respects, the judgment of the clown is cultivated, that of the literary man uncultivated. Moreover, the education of the field is far superior to that of the factory, where the occupations are uniform and unvarying, tending as little as possible to improve the intellectual faculties. Consequently, some other intellectual exercise is much more necessary to the manufacturing workman than to the agricultural labourer. The very calling of the rustic educates him, not so that of the operative. What ideas can a man gain by tending

a spinning-jenny all day, and every day? *He* indeed requires what we may venture to call a learned education.

19. From all that has now been said, it will not be difficult to form a pretty accurate notion of the Judgment. We have seen that this faculty comprises Belief, and something more, namely, a discernment of the truth, a discernment of the agreement or disagreement of two related objects, whether notions, or things corresponding to notions. And this discernment is rapid, not comprehending a process of reasoning of which we are conscious at the time; though, in the case of cultivated judgment, it may be the result of long previous observation, and even reasoning. Therefore, judgment may be defined to be *that faculty whereby we rapidly discern, without reasoning, the agreement or disagreement of two objects, whether notions or things, either intuitively, or aided by cultivation.* This may be otherwise expressed. Judgment is that faculty whereby we rapidly discern, without reasoning, the permanent relations of Notions or of Things; *permanent*, as opposed to those *casual* or *temporary* conjunctions in Time and Space, which, only by an extension of the term, can be called Relations at all.

20. But, it may be asked, what do we mean by *discerning?* Of this we can give no explanation, nor is any necessary. The word *seeing* is sometimes used for discerning, as when we say that we *see* the truth of a proposition; but neither term

can be defined, for they defy analysis. But we know intimately what it is to *discern*, and no definition could tell us more about it than we know already.

21. When a particular act of Judgment is expressed in words, it constitutes a Proposition, as when I affirm that "Hannibal was a better general than Flaminius." But since we have seen that there may be Belief or Disbelief, and consequently affirmation or denial, without an act of Judgment, there must also be propositions expressive of simple Belief, as when I say that, "I played at cricket yesterday." Consequently, the metaphysical definition usually given of Proposition, namely, *A Judgment expressed in words*, will not apply to all cases. *A Relation expressed in words* is preferable; but even this is not applicable to propositions expressive of mere existence, as "God exists," or to those where identity is affirmed, as when I say, "this is the same man whom I met yesterday." It is not easy to make out any relation in these and similar propositions. Nay, it is only by an extension of the term that the word *Relation* can be at all employed in the case of those casual conjunctions in Time and Space out of which innumerable propositions can be framed, such as, "yesterday I walked ten miles in the country;" "this morning I played at bowls," etc., etc. Therefore it seems to me better to define a Proposition as *A verbal statement of Belief or Disbelief*

in any fact; for every act of Judgment supposes belief, though every case of belief does not imply Judgment.

22. The above is properly a *metaphysical* definition, looking especially to the mental phenomenon Belief, in which the verbal expression originates; whereas the *logical* definition regards first the form of words, and through them ascends to the meaning. Thus the logical definition of Proposition will be that given in the author's "Introduction to Mental Philosophy," namely, *A sentence, or combination of words with meaning, whereby something is affirmed or denied of some other thing, either simply, or with some modification.* The two definitions agree, they are quite consistent; they differ only in the point of view from which they regard their subject. While the Metaphysician analyzes the phenomena of mind, in order to determine the nature of Belief and Judgment, which terminate in propositions, the Logician must analyse propositions themselves. But having treated of Proposition fully in the above work, I need add no more in this place.[x]

23. Before concluding this chapter, I must make one or two remarks on the opinions of my predecessors. First, I may notice the opinion of Brown, who thinks, because all the Intellectual

[x] See the Author's "Introduction to Mental Philosophy." Part II. Art. PROPOSITION.

faculties can be reduced to two, which he calls Simple and Relative Suggestion, that therefore the common classification into Conception, Imagination, Memory, Judgment, the Reasoning faculty, etc., is erroneous. It is quite ridiculous to suppose that these very natural classifications can be altogether wrong. They may not, as commonly used, be very accurate divisions, but they are far too obvious, and too general, to be without some good foundation. It has been my object in the preceding pages not to overthrow this classification, but to define more accurately the limits of these various powers. They are proximate powers if you will, but not the less real on that account, nor the less important. What should we think of a chemist, who, having analyzed all vegetable and animal substances, and found them to consist *ultimately* of Carbon, Oxygen, Hydrogen, and Nitrogen or Azote, should deny the existence of the *Proximate* principles, Albumen, Gluten, Gum, Resin, Fibrin, Gelatin, Mucous membrane, Serous membrane, etc., formed by the combination of those elements in different proportions? Proximate, according to Bacon, are more fructifying than ultimate principles. Brown makes no distinction between Comprehension, Belief, Judgment, and Reason, which be confounds with Reasoning. Though all these may belong to Relative Suggestion, that tells us but little of what we wish to know.

24. The following passage of Reid seems to demand notice. "The natural principles by which our judgments and opinions are regulated before we come to the use of reason, seem to be no less necessary to such a being as man than those natural instincts which the Author of nature has given us to regulate our actions during that period."[7] Here it is supposed that there may be judgments without reason. This, according to my sense of the word Reason, is impossible; for Judgment, as I have stated, is one of the faculties comprehended under the more general faculty of Reason, intuitive, as well as cultivated Judgment. There may be Judgment without Reasoning, but not without Reason, and that may have been the real opinion of Reid, though he has expressed it inaccurately.

25 Lastly, in reference to the views of Locke above stated, namely, that Judgment consists in what he calls the presumption of the agreement or disagreement of ideas, in opposition to the perception or certainty of such agreement or disagreement; I may remark first, that the limitation of Judgment to probability is contrary to all usage and all authority; and secondly, that the word *idea* is at least ambiguous. When I compare one affection of the mind with another, as Love with Ambition, I may call these *ideas* if

[7] Intellectual Powers. Essay VI. Chap. V.

you will, and judge of their agreement in some respects, their disagreement in others; but, were I to compare Gold with Silver, it would certainly sound very strange to call them *ideas.* Assuredly I must have an Idea or notion of Gold and of Silver before I can compare them, but the Notions are only employed as means to get at the knowledge of the Things; whereas, in the case of Love and Ambition, the idea and the thing are one. Now, did Locke mean to include external things under the name of ideas? Surely he would have allowed that we can judge of things external, as well as of mental phenomena, but of the former only through the latter. This was probably his meaning, though it must be allowed that he has expressed it very ambiguously. And that it was his meaning appears from the concluding sentence of his Chapter "Of Judgment," which is as follows: "And if it (the mind) unites or separates them, as in reality Things are, it is right Judgment;" and a little before, "This faculty of the mind, when it is exercised immediately about Things, is called *Judgment.*"[1]

26. In conclusion, we must remark that we do not pretend to trace any very broad line of

[1] If the marginal references be by Locke, my view of his doctrine will be confirmed; for the reference here is as follows: "Judgment is the presuming Things to be so, without perceiv-" ing it." Essay Concerning Human Understanding. Book IV. Chap. XIV.

distinction between Judgment and Reasoning. The two faculties are intimately allied. Every conclusion drawn by reasoning requires an act of Judgment, and though there may be Judgment without Reasoning, yet the only difference is, that in the one case the Judgment depends upon some previous proposition, or at least mental decision, in the other not. This does not seem to argue any very great difference in the mental faculty. In many cases, where the intellectual decision appears to be immediate, a very rapid process of reasoning probably goes on, too rapid perhaps to be the subject of reflection, but not the less real. In other cases, however, we have no grounds to believe in any such process, and here therefore there is Judgment without Reasoning. This is enough to distinguish the two. The one might be called *Simple*, the other *Compound* Judgment, considering them as species of one Genus. But we are told by Dugald Stewart that there are cases where the decision may be attributed to either, according to the statement.[a] Thus when we say that "things which are equal to the same are equal to one another," we enunciate an axiom, the belief in which seems to depend upon simple Judgment; but when we state that "A B is equal to B C, and A C to B C, therefore A B

[a] Elements of the Philosophy of the Human Mind. Part II. Chap. II.

is equal to A C," we seem to arrive at the same truth by means of Reasoning. In the one mode of statement it appears as a primary truth, in the other as a conclusion. Here, however, a distinction must be made. What we prove by the above reasoning is not that things which are equal to the same are equal to one another, but that A B is equal to A C That is the exact conclusion arrived at. Here are two quantities, represented by A B and A C, related to each other, but how we know not. As we cannot compare them directly, we must try and find some common medium or middle term with which they may be compared respectively. This is B C, and since both the original quantities are known to be equal to B C, we conclude that they are equal to each other. Here it is not the axiom which is proved, but the axiom is involved in the proof of the conclusion that A B is equal to A C. The axiom is an essential element of the Reasoning, not a major premiss, not a premiss at all, for the reasoning is perfect without any such premiss, but an elementary Constituent or Principle of the Reasoning, making it what it is. That there are several other Principles of Reasoning, we shall see in the following chapter, meaning by Principle an elementary constituent, for this is one legitimate use of the word, just as Carbon, Oxygen, Hydrogen, Azote, are Principles

or Elements of all animal matter.[b] These must not be confounded with what we call the Principles of any Science, meaning the fundamental propositions from which many less general conclusions may be deduced; for the elementary Principles are, one or other of them, essential to all Reasoning, a part of its very nature. To suppose then that the Axiom above quoted is proved by the Reasoning adduced, is quite a mistake, and even absurd, for it is self-evident, and therefore incapable of proof; but the axiom is involved in the reasoning necessary to prove that A B is equal to A C.

To sum up all in one sentenee; Judgment discerns the agreement or disagreement of notions or of things: Reasoning discerns the agreement or disagreement between one simple Belief, or one Judgment, and another. But the further consideration of Reasoning must be left to the following Chapter.

[b] See the Author's "Introduction to Mental Philosophy." Part I. Article PRINCIPLE.

CHAPTER X.

OF REASONING.

SECTION FIRST.

OF REASONING IN GENERAL.

1. God, having given us a mind framed for some original Articles of Belief, and for some Intuitive Judgments, has provided us afterwards with two grand means for the discovery of truth, and the advancement of knowledge, OBSERVATION, and REASONING. Some truths are learnt by observation alone, as particular facts submitted to the senses; others by reasoning alone, as the truths of pure Mathematics; others again, and by far the greater number, by observation and reasoning together. All men know what is meant by Observation. Suffice it then to remark, that observation is of two kinds; the one exercised upon phenomena over which we have no control, as observation on the weather, the other upon changes which we ourselves have induced, as in Chemistry, or in Mechanical Philosophy. The former may be called *natural*, the latter *artificial* observation, for it is exercised upon *experiments*. The word EXPERIENCE is nearly synonimous with Observation, but in the latter more of intention

is implied. Observation supposes a wish to learn, while in simple Experience we learn without a wish, without any conscious effort. At first we learn from simple Experience, subsequently from Observation.

2. Though all men know what observation is, but few, comparatively, know *how to observe* to the best advantage. Observation, simply, is of limited use, for it is confined to particulars; it may certainly prevent us from falling into a pit, or sinking into a quagmire, before our eyes, but unless some inference be drawn from it, no science, no general truth of any kind, can be established. Consequently, Observation is useful chiefly as a ground for inference; and in common discourse, as well as in many popular works, the two are so blended that it does not readily appear where the one ends, and the other begins. Observed facts, and inferences from these, are continually confounded by inaccurate speakers and writers.

3. Nor will this surprise us, when we reflect that there are cases where even thinking men might not agree upon what was observed fact and what was inference. When I observe the clouds rising heavily in the south-west, and foretell rain ere long, I evidently draw an inference. Again, when Robinson Crusoe saw what exactly resembled the print of a naked man's foot on the sand, he readily inferred that a man had passed that way, so readily, indeed, that the inference was

almost as an observed fact. But, when I put my hand before the fire and say that the fire warms it, is this an observed fact, or an inference? An observed fact most people would say, but strictly speaking, not so; for though the heat which I feel is an observed fact, and the presence of the fire likewise, yet the assertion that the one is the *cause* of the other is an inference, irresistible no doubt, and for all practical puposes as good as observation, but metaphysically different. These cases instruct us, 1, that observed facts and inference are not always easily distinguished, and 2, that sometimes the inference is as firmly believed as the observed fact, and may be so without any danger of error.

4. We might even refine upon this, and maintain that the very existence of the fire, and indeed of all outward objects, commonly said to be observed, is known to us only by inference, inference from certain sensations, which irresistibly suggest the notions of external objects, and the Belief in their real existence independent of us. Thus Observation, strictly so called, would be confined to the phenomena of our own minds. Nor can this be denied; though for all practical purposes, it would be necessary to distinguish between those irresistible inferences drawn by all men, without effort, without knowing what they are doing, and such conclusions as they consciously deduce, and distinguish from the premises. Whether the term

Reasoning should be limited to the latter process. we shall see presently.

From the foregoing two Corollaries may be deduced:—First, we see how erroneous are the opinions of those Materialists, such as M. Comte, who treat Psychology with contempt, except as a branch of Physiology, and who plume themselves on their *positive* philosophy. In any philosophical sense that can be given to the term *positive*, the phenomena of Psychology are so peculiarly; for they are beyond all doubt, and they alone are known to us immediately. All material phenomena are known only by inference. Secondly, we learn how limited is the sphere of Experience proper, embracing only mental phenomena unconnected with the world without, for all connection, all relation, between mind and matter, and between matter itself, is not experienced, but inferred. Causation, for instance, at least in the material world, is known only by inference; and this, no doubt, is the reason why M. Comte denies that Causes are a proper object of Philosophy, and maintains that we can know nothing but sequences of phenomena; forgetting that the uniformity of these sequences in time to come, nay, the very existence of the material subjects of these sequences, is known to us only by inference. It is only by giving a wide and loose sense to the term, so as to embrace a great deal of inference, that Experience can be made of the importance sometimes

assigned to it. Except in Psychology, experience proper merely lays the foundation of our knowledge; all above ground is Rational or at least Intellectual development.

5. The nature of Reasoning, and its different kinds, are not so generally understood as Observation. Though, as we shall afterwards find, there are different sorts of reasoning, there must be something common to all, or the name *reasoning* would not have been given to the process in all cases. Our first question then must be, what is common to all reasoning?

6. Wherever reasoning is expressed in words, it is stated in propositions, in two at the very least, and in propositions so connected that the one establishes the other. And when we say two propositions or more, we of course mean that there really are two or more, different in some respects, and not quite the same. The essence of an argument then is this, that it consists of two or more *different* propositions, one or more of which serve to establish the other. Now, in every argument the proposition or propositions which serve to establish the other are called the PREMISES, and the Proposition established, or *inferred* as the phrase is, is called the CONCLUSION.

Such is the logical account of Reasoning expressed in words, or an Argument. And to translate this into metaphysical language, we have only to call to mind our definition of Proposition,

viz.: A verbal statement of Belief or of Disbelief in any fact. According to this, wherever our Belief in any fact or facts compels us to believe another fact different from the former, as a cause brings about an effect, there is Reasoning, whether stated in words and propositions or not.

7. From the above we see that Reasoning may be viewed in two points of view, the Logical and the Metaphysical. Speaking logically, we say that one proposition follows or flows from another, or that it is a CONSEQUENT of one or more other propositions; but speaking Metaphysically, we must say that our Belief in a certain fact is an EFFECT of some prior Belief. It would be absurd to state that one proposition is the *Effect* of another, and incorrect to affirm that our Belief is the *Consequent* of a former Belief. *Consequence*, indeed, we might say, but *Consequence* would then be synonymous with *Effect*. One proposition cannot be the cause of another, it is only the *cause of our knowing it;* but one Belief is properly the cause of another Belief.

8. This distinction, obvious though it be, is of the greatest importance. It at once points out the respective provinces of Metaphysics and Logic, in respect to Reasoning. To analyze the mental process of Reasoning belongs properly to Metaphysics, and not, as Archbishop Whately supposes, to Logic; while to Logic, it peculiarly appertains to give correct types or models of arguments, and rules for

arguing soundly or conclusively. Metaphysics take man *as he is*, and show how he commonly reasons; whereas Logic points out how he *ought to argue*, in order to arrive at sound conclusions. The one is purely speculative, the other combines speculation with practical application. In giving correct types or models of argument, Logic cannot pretend that men always argue so, for in this case there would be no use for Logic, but only that they ought always so to argue, if they would argue well. Metaphysics treat of arguments only incidentally, the mental process being here the proper subject; while Logic, on the contrary, touches upon the reasoning process, only because arguments necessarily suppose it. There may be reasoning without argument, that is without words, but, of course, there can be no argument without reasoning. Logic, then, is a Science principally concerned about types, models, or forms, whereby to test the validity of all arguments, and, of course, of all reasoning that can be reduced to arguments. We shall probably find that much of that hopeless confusion, which prevails in some works on Logic, arises from a want of attention to the fundamental distinction here laid down, the distinction between the respective provinces of Metaphysics and Logic in regard to Reasoning.

9. In illustration of the above general statements, we may now bring forward some particular examples of Reasoning. Suppose that there are

two walls, and that I wish to know their relative height. As I cannot place one wall beside the other, I must look out for some common medium of comparison, and for this purpose I choose a measuring line; by applying which to both I find that each is just twenty feet high. I instantly conclude that the one wall is equal in height to the other. Stated in propositions, the reasoning will come out thus:— Let A be one wall, B the other, and C the measuring line of twenty feet.

Then A is equal to C,

And B is equal to C,

Therefore A is equal to B.

Here the conclusion follows irresistibly from the Premises, or the reason is demonstrative. The Premises, moreover, consist of two propositions, both of which are necessary to establish the conclusion.

10. Taking a case formerly stated, when Robinson Crusoe saw the marks of a naked foot on the sand, or more strictly, what looked like the print of a foot, he instantly concluded that a man had passed that way. Drawn out into propositions, his reasoning would appear thus:—

Here is a mark on the sand.

It is a mark very like a foot-mark.

It is so like that it must be such a mark.

Therefore a man must have passed by here.

This conclusion leaves no rational ground for doubt; but the reasoning is not strictly demonstra-

tive; for it is just possible that something very like a foot-mark might have been otherwise made; and the third proposition, which is in fact a first inference, and not infallible, is necessary to establish the conclusion finally arrived at.

11. Again, when I look to the South-west, and see the clouds rising heavily, I conclude that we shall have rain here long. Stated in propositions my reasoning would be this:—

I see heavy clouds rising in the South-west;

But I have formerly observed that similar clouds rising in that quarter have been followed by rain.

Therefore, we shall soon have rain again.

In this case it is evident that the conclusion is by no means certain, and that the reasoning is only probable.

12. While walking in my garden I hear a sound. After a moment's observation and reflection, I conclude that it is the sound of a village church bell about a mile and a half distant. How do I arrive at this conclusion? The mental process may be thus stated in words:—

I hear a sound.

The sound is very like that of a church bell formerly ascertained.

Therefore it is the sound of a church bell.

Moreover the sound is low.

And a low sound from a church bell must come from a distance.

Therefore this church bell is distant

Again, I observe the clouds and see that they are moving from the South-west.

But clouds are driven by the winds.

Therefore the wind is in the South-west.

Finally, wind brings sound.

And I know that there is a village church a mile and a half off in a South-west direction.

Therefore the sound comes from that church.

All this, and perhaps more, passes through the mind with the rapidity of thought, and the whole embraces at least four arguments, one arising out of the other. Here also it is evident that the conclusion, though highly probable, is not quite certain.

13. Of the three cases of probable reasoning now stated, by the first we arrive at the knowledge of a past fact; by the second, of a future event; and by the third, of a contemporaneous but distant occurrence. Thus, the past, the future, and the distant, all clearly beyond the sphere of observation, become known to us by Reasoning.

14. When we consider the four examples of reasoning given above, we find that what is ascertained in the first case is a Relation of Equality, a relation of equality between the two walls represented by A and B; while, in the other cases, a Relation of Cause and Effect is inferred. Thus, in the second example, we infer that a certain mark on the sand was the effect of a human foot; in the third, that certain clouds in a certain direction will soon cause rain; in the fourth, that a certain sound

is the effect of the movement of a church bell. Moreover, in the last example I also infer that the church bell is so far distant from me, relation of Quantity; likewise that the church is to the South-west, relation of Position. Thus in every one of these inferences some Relation is established.

15. Relations, from which Reasoning proceeds, or which it establishes, are various; but they may all be classed under three heads:—

I. Relations of Co-existence;

II. Relations of Succession;

according as they do not, or do, involve the notion of time; and

III. Relations of Resemblance, which may or may not involve the notion of time.

The Relations of Co-existence are numerous, such as

1. Relations of Position.

2. Relations of Comprehension, or of a whole to its parts.

3. Relations of Quantity, or more, equal, less, which may be called *exact* Relations, in contradistinction to

4. Relations of Quality or of *indeterminate* Degree.

Relations of Succession, on the other hand, are either of Invariable Succession or of Casual Succession.

These distinctions will be useful to us in deter-

mining the different kinds of Reasoning; but, in the mean time, they are sufficient to show how vast is the field which it embraces.

Moreover, as we have seen, there are certain propositions in which no relation is expressed, namely, those which state Identity and simple Existence; and since these propositions may be established by argument, therefore, we cannot say universally that reasoning is employed in establishing the *relations* of things. Accordingly, in Par. 6 and 7, where reasoning is defined, no mention is made of Relation. To establish relation may be the general office of reasoning, but, strictly speaking, it is not the only office.

SECTION SECOND.

ON DIFFERENT KINDS OF REASONING.

I. OF DEMONSTRATIVE REASONING.

1. Having seen what is common to all Reasoning or to Reasoning in general, we have next to consider whether there be not Reasonings so differing from each other as to constitute distinct sorts or kinds. That there are such, men are generally agreed; and the common use of language is a proof of this agreement; for they would not talk of *demonstrative*, *probable*, *inductive*, *deductive*, *a priori*

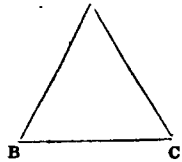
and *a posteriori* reasoning, unless they supposed that the genus Reasoning admitted of specific differences.

2. The first grand division of Reasonings is that into the DEMONSTRATIVE and the PROBABLE, the inference in the former following IRRESISTIBLY from the Premises, in the latter, not. In demonstrative reasoning, if we admit the Premises, we must also admit the conclusion; for otherwise we do violence to our Intuitive Judgment; whereas, in probable reasoning, we may allow the Premises and yet reject the conclusion; certainly not in all cases without shocking common sense, but, at least, without denying a self-evident Judgment. In probable reasoning we may disallow the conclusion, and yet allow the Premises; but, in demonstrative reasoning, if we deny the conclusion we must also deny the Premises, that is, we must contradict that from which we set out as granted. And this necessity of denying the Premises is a proof that the inference therefrom was infallibly drawn. The distinction then between Demonstrative and Probable reasoning is clear and definite.

3. But Demonstrative reasoning itself admits of subdivision, according as the subject or matter of which it treats is *necessary* or *contingent*. In the former case the conclusion not only follows irresistibly from the premises, but it is infallibly true; whereas, in the latter, though the inference be irresistible, yet the conclusion may be false, for the premises may be false. Thus, strictly speaking, it

is not the reasoning that differs, but the certainty of the fact inferred. Still, this difference is important, and thereupon we found the distinction between *Necessary* and *Contingent* Demonstrative Reasoning.

4. Necessary Demonstrative reasoning is strictly *a priori*, that is, independent of experience; while all other reasoning is strictly *a posteriori*, or dependent upon experience, either immediately or remotely. Necessary reasoning is confined to Mathematics, or the Science of Quantity; and, contrary to what is often thought, is not founded on general principles or axioms, but on self-evident particular truths. The evidence of the propositions of Euclid does not rest upon the axioms placed at the beginning of the work, but upon the particular instances of those axioms which occur in any proposition. Thus, when in the first proposition we show that, in the triangle A B C, the side A B is equal to the side B C,



and the side A C to B C, we conclude at once, without the intervention of any general axiom, that the side A B is equal to the side A C. The general axiom, "things which are equal to the same are equal to one another," cannot make the conclusion one whit more evident than it was before. We see

at once from the particular *data* that such must be the conclusion, or, if we do not, no general axiom can convince us. The truth then of the propositions of Euclid does not rest upon the axioms, nor were they first demonstrated from these. The axioms are placed there *pro forma*, and give a more scientific air to the whole, but they are not indispensable. They are neat and convenient, as expressing in a general form all that we are obliged to admit in particular cases throughout the work that follows; and nothing more.

5. As particulars must be known before we can generalize, so particular instances of the truth, that "Things which are equal to the same are equal to one another," must have been noticed, before we could state it in the form of an universal axiom. Not that the axiom is proved by an induction of particulars, as some affirm, but only that particulars were necessary to allow us to comprehend the general proposition. As soon as comprehended, its truth is self-evident. Still less, (if in such a matter degree were possible) is the general proposition required to prove the particular instances. In like manner, having proved any proposition of Euclid in a particular case, the mind instantly generalizes the truth, for it sees that what has been proved in the instance before it must hold good in all other instances where the *data* are exactly similar.

6. I am well aware that a very high authority in Logic maintains that we cannot draw the simplest

inference in Mathematics without the use of an universal principle; and that even the reasoning A B is equal to B C, and A C to B C, therefore A B is equal to A C is elliptical. Stated in full we are told that reasoning would be as follows:—

What are equal to the same are equal to each other;

A B and A C are equal to the same (B C); Therefore A B and A C are equal to each other.

How is this question to be determined? First, by an appeal to Consciousness, the supreme tribunal in Metaphysics. To consciousness, then, we do appeal, and we maintain that the reasoning A B is equal to B C, and A C to B C, therefore A B is equal to A C, is not elliptical; that nothing is wanting to the evidence of the conclusion, that the mind discerns that conclusion as resulting from the premises, at once, and irresistibly. But, secondly, with all due respect to the above authority, the statement given as the full one appears to me to err both by redundancy and deficiency. It errs by deficiency, for the second proposition is a compound one, embracing two simple propositions, being equivalent to

A B is equal to B C, and

A C is equal to B C;

consequently, the statement in full will be as follows:—

What are equal to the same are equal to each other:

A B is equal to B C,
and A C is equal to the same B C;
therefore A B and A C are equal to each other.

Here we have a syllogism of four propositions, and therefore *informal*, on the principles of the School logicians themselves, for no proper syllogism should have more than three propositions. One therefore must be redundant, and it is easy to see that the first is, for take it away, and the proof is still perfect. Does any one deny the validity of the reasoning without the universal proposition, and ask for more proof? We have no more to offer, for we cannot give a demonstration of a demonstration; and that it is a demonstration we confidently appeal to the consciousness of any man of common understanding. As for what is called the full statement, we deny that it is one whit more satisfactory than the other, or that it is the natural mode of reasoning. It is an artificial mode, invented to prop up a theory, by reducing mathematical reasoning, apparently, to the syllogistic form, and only apparently, for after all, the syllogism is redundant.

7. We must not confound Analysis with Generalization. The reasoning A B is equal to B C, and A C to B C, therefore A B is equal to A C, seems to admit of no further analysis, it is complete in all its parts, all is expressed; but when we come to compare this with other examples of reasoning, we find that there is a striking similarity between them, which similarity, or point of agreement, may

be stated as a general principle, and formalized in words, thus, "things which are equal to the same are equal to one another." This general principle, then, is said to *pervade* all such specimens of reasoning; that is, each is a particular instance thereof. But we must not therefore suppose that each is proved from the general principle. On the contrary, but for the particular instances, the general proposition would never have been thought of. It comes *after* the particular proofs, by a process of generalization, forming an axiom convenient for the purpose of communicating knowledge, and satisfactory to the mind of the learner, as showing at a glance all that he is called upon to take for granted in the ensuing demonstrations; but it cannot be necessary to a proof which is evident without it, and which actually was established without it; for few will maintain that the geometrical discoverer began by laying down axioms.

8. Taking the above as a specimen of demonstrative necessary reasoning in general, and it may be so taken without any danger of error, we see that at least two previous propositions are required to establish any mathematical conclusion. First, we have A B equal to B C, then A C equal to B C, and lastly, A B equal to A C. B C may be called the middle term, or medium of comparison between A B and A C. No doubt, we might so state the argument as to give it the appearance of two propositions only. Thus we might say

that A B and A C are each equal to B C, therefore A B and A C are equal to each other. But, in this statement, it is clear that the first proposition is a compound one, one only in form, two in sense, being equivalent to A B is equal to B C, and A C is equal to B C. Consequently, the two above propositions are equivalent to three.

9. All the reasonings of pure Mathematics are Demonstrative, and the conclusions arrived at are certain and eternal, or, in other words, independent of time; for, first, they start from self-evident and necessary truths, and the mind sees that they are and always must be so; secondly, the names employed are names of universals, which exist not as real matter of fact; thirdly, these universals belong to quantity alone, and so admit of an exact definition, or, in other words, they can be accurately distinguished one from another; and lastly, the deductions from these self-evident necessary truths, and these definitions, are seen at each step to be also irresistible, and unchangeable even by Omnipotence. Since each step in the deduction is self-evident and necessary, as well as the first position, the conclusion must be true.

10. But, do the Relations of Quantity, or of Equality and Inequality, alone admit of Demonstration? Certainly they alone admit of a long chain of demonstration; though we shall see, under the head of Contingent Reasoning, that a single demonstrative argument or two may be

formed about other relations. And why do the relations of Quantity peculiarly admit of demonstration? Because the modes or modifications of Quantity alone can be accurately distinguished. One is as distinct from two as from two thousand. This is the case with no other modes. Other modes admit of *indefinite graduation*, not so those of Quantity. These do not *shade* off one into another. It is on account of this *indefinite graduation* that other relations are very little susceptible of demonstration. Take for example moral Relations. With the exception of Justice, which is more definite, one Virtue passes by insensible degrees into its kindred Vice, and one Vice into its kindred Virtue, as thrift into parsimony, parsimony into thrift; and all we can say is, that Virtue lies *somewhere* between the two extremes, prodigality and niggardliness. This of course is very vague, very unlike demonstration. And had Law been a demonstrative science, we should not have had so many volumes written to determine in particular cases what is Justice. We may therefore safely conclude that the opinion of Locke, that morality admits of demonstration, is erroneous. QUANTITY is the proper subject of demonstration, QUALITY of probable reasoning: and morals treat of Quality.[c]

11. The range of certainty is very limited,

[c] See the Author's "Introduction to Mental Philosophy." Part I. Article, QUANTITY.

comprising only the pure Mathematics; for even Mechanical Philosophy, which uses demonstrative reasoning, is based upon experience, and therefore it may err; though, granting certain principles, such as the Laws of Motion, the conclusions deduced from these are infallibly true. That is to say, they are infallibly true, granting those principles, and supposing that no others come into play; for it often happens that the conclusions of the Mechanical Philosopher are wrong in reality, because there are in nature other principles which he has not taken into account. Even the pure Mathematician sometimes arrives at absurd conconclusions, absurd in material nature, though true in the world of Universals, for they follow irresistibly from his *data*, i.e., from self-evident necessary truths, and from his own definitions, which correspond not exactly with anything really existing. Such a conclusion is that of the *Asymptote*, or a straight line which, though continually approaching, can never meet a certain curve. The same may be said of the infinite divisibility of matter. It is proved mathematically, but it is physically impossible.[d]

[d] If even perfect Ratiocination, such as the Mathematical, may lead to conclusions absurd in material nature, surely the best possible Ratiocination on other subjects may also lead to absurdities. Some German philosophers of the present day, men of much thought, have reasoned themselves into PANTHEISM! It is the business of Experience to correct the errors of pure Reasoning.

12. Dugald Stewart has shown very well that Mathematical conclusions are not deduced from the axioms; but he maintains that they are founded on the definitions alone, which he calls the First Principles of the Science. To give the name of Principle to a Definition is certainly unusual, and can only be justified on the ground that the definition is a Fundamental Proposition on which the Science is built, and such is the opinion of Stewart But this cannot be accepted as a correct metaphysical view of the subject. The definition is only the means of acquiring accurate Conceptions, and did we possess such conceptions without definition we should be as well off. The accurate conception is the thing we want; to this the definition is only subservient. To make Mathematical truth dependent on definition is to make it dependent on a form of words, not on clearness of conception, it is to take the *form* for the *substance.* But Reasoning cannot proceed from Conceptions alone, but from these together with some intuitive Judgments concerning them. The latter, as we have remarked, are Judgments concerning self-evident particular truths, which the mind instantly generalizes, and applies to all cases exactly similar. Accurate Conceptions, then, and Intuitive

Bacon has admirably pointed out the dangers of Rationalism, as well as of Empiricism. Novam Organum. Lib. I. Aph. LXII. LXIII. LXIV.

Judgments about Self-evident truths, are the real foundation of all mathematical reasoning. This accuracy, again, and this self-evidence, depend upon the nature of Quantity, which alone admits of exact modifications and relations. Those self-evident truths, when generalized and stated in words, become Axioms.

13. Closely connected with the opinion that the Mathematical theorems depend entirely on the definitions, is the doctrine that Mathematical Truth is only hypothetical; though the reasoning be infallible, that the conclusions are only logically correct, not really true. Suppose it granted that no perfect lines, triangles, circles, etc., such as Mathematics contemplate, exist in matter. What then? does Mathematics ever assert this? does it pretend to be a Physical Science? By no means. It is the science of Quantity, of Space, Time, and Number, and these are independent of all matter. We must not seek in one science what belongs to another; we must no more look for the properties of matter in pure Mathematics than for the laws of matter in those of Mind. But our conceptions of mathematical lines, triangles, etc., are perfectly clear and distinct, genuine creations of abstraction, not arbitrary mental inventions, not the creatures of imagination, as clearly apprehended as space and time themselves. Is it not then an abuse of words to say that truths founded on such notions are hy-

pothetical, and does not such language convey an impression utterly erroneous? If mathematical lines, triangles, and circles, be hypothetical, so is space itself; for those are only the modes thereof. Moreover, though perfect mathematical figures may no where exist in matter, yet we can approximate to perfection; and thus the ideal truths of Mathematics become with slight correction applicable to the material universe. This again proves how little the truths of Mathematics deserve the appellation of hypothetical. But the opinion is agreeable to those who would trace all real knowledge to Sensation and Experience, and who depreciate all *a priori* decisions of the intellect; though Dugald Stewart is certainly not of that number.

14. We must not materialize the Science of Quantity any more than that of Mind. The former alone, of all human knowledge, comes up to the Platonic notion of Science, being conversant about the unchangeable relations of unchangeable IDEAS. To make matter the measure of the accuracy of these Ideas, is to degrade the Science of Quantity entirely, to confound it with mutable Physics, to bring it down to the Earth. But to represent mathematical truths as hypothetical is still worse; for in that case the Science would be frivolous, a mere play of reasoning, a mighty intellectual exercise, with an impotent conclusion. Let the vast discoveries in Natural Philosophy

and Astronomy, made by means of Mathematics, tell whether her conclusions be hypothetical. Other Sciences, while they show the strength of the human intellect, also prove its weakness, for disputes in them are endless; but were we to look to Mathematics alone, we should pronounce that Intellect all-powerful. The column of Mathematical truth is the noblest monument of human intelligence, because it is at once vast and immovable. Metaphysical Science may be more interesting, but it is like a ship tossed by the waves, always in danger of shoals and rocks; while Mathematics stands as a martello tower, cold, rigid, and unchangeable.

15. We have next to consider Demonstrative Reasoning applied to *Contingent* matter. But first it may be asked whether this be a possible case. Does Contingent matter admit of demonstration? That it does to a small extent at least, a few examples will suffice to prove.

1. Taunton is further from London than Bristol; and Exeter is further from London than Taunton; much more then is Exeter further from London than Bristol.

Here the reasoning is strictly demonstrative, or the conclusion follows irresistibly from the premises; though the matter be contingent: for the respective distances of Taunton and Bristol, and of Exeter and Taunton, from London, on which the inference is founded, are contingent

facts. Therefore, though the inference be irresistible, the conclusion may not be true. Here the relation established is one of relative distance or quantity. Thus, relations of Quantity become themselves contingent, when brought down to matter of fact. Observe also that the form of this Reasoning exactly corresponds with the Mathematical, consisting of three propositions, and that these three propositions are indispensable; for, from the first proposition, a person totally unacquainted with the position of Exeter could infer nothing; and, from the second proposition, one unacquainted with the position of Bristol could infer nothing; both, therefore, are indispensable to the conclusion, which is not comprehended under either.

2. Again, A is the cause of B; but B is the cause of C;

Therefore, A is the remote cause of C.

Here also the reasoning is demonstrative; though the matter be contingent, for it is relative to Causation.

3. Or, taking less general examples,

Application depends upon the will; but intellectual advancement depends much upon application;

Therefore intellectual advancement depends much upon the will.

4. Cost of production regulates supply and demand; but supply and demand regulate price;

Therefore cost of production is a remote cause of price.

5. Romulus founded Rome; but Rome conquered great part of the world, and rose to an unexampled pitch of power and grandeur;

Therefore Romulus was an original cause of the power and grandeur of Rome.

Here, also, the conclusion follows irresistibly from the premises; though it may be a question whether Romulus ever founded Rome, or whether he ever existed.

These examples seem sufficient to prove that demonstrative reasoning may be applied to contingent matter; though we fully allow that, with one important exception, it can go but a little way. This exception exists in the case of relations of Quantity in Contingent matter. The whole of Natural Philosophy, embracing Mechanics, Hydrostatics, Pneumatics, Optics, consists of demonstrative reasoning tracing the relations of Quantity in things contingent, in matter of fact, the first laws of which are known by experience. The same may be said of Physical Astronomy. Here, then, Demonstrative reasoning applied to Contingent matter has ample scope.

16. And why, with this exception, can demonstrative reasoning go but a little way in contingent matter? The reason for this we have already shown under the former head. The relations of Contingent matter are of course various, and not

confined to Quantity, and therefore, as we have seen, they are for the most part *indefinite* relations; their differences are not *accurately* distinguished; and consequently they do not admit of demonstration. There is also another reason. All matters of fact, every thing contingent is liable to be influenced by many causes and circumstances (which are auxiliary causes); and to determine the exact efficacy of each is often impossible. We may affirm with certainty that one thing is *a* cause of another; but we can rarely pronounce it to be *the* only cause. Thus, to take one of the examples above given, we may be sure because Application depends upon the Will, and Intellectual advancement depends upon Application, that, therefore, Intellectual Advancement depends *in part* upon the Will; but it would be an incorrect inference, as well as a false conclusion, to say that it depended *entirely* upon the Will; for it is not assumed that Intellectual advancement depends *wholly* upon Application; and, were it assumed, it would be false, and therefore the conclusion drawn from it also false. In general, if A be a cause of B, and B a cause of C, we may safely conclude that A is *a* remote cause of C, but not the only cause. Some cause generally remains which we cannot calculate, and which nullifies our boasted demonstration. It is apt to be so even in relations of Quantity, where matter of fact is concerned. Calculations unerring, so

far as the *data* are concerned, are found deceptive in practice, because other causes have not been taken into account, causes more hidden, more variable, such as friction, the resistance of the atmosphere, its varying temperature, weight, dryness, and moisture. Here lies the danger of pure ratiocination. A chain of reasoning, in which it would be difficult to detect a flaw, sometimes leads to absurd conclusions, because more has unwarily been assumed than it was fair to assume, or something has been omitted which ought to have been taken into account. The only remedy for these errors is Experience.

17. All the examples hitherto given of demonstrative reasoning consist, as we have seen, of three distinct propositions, the conclusion being established by means of an intermediate proposition, and a middle term, whereby the Subject and the Predicate of the conclusion are compared or measured. Thus in the reasoning, A B is equal to B C, and B C to A C, therefore A B is equal to A C, B C is the middle term, which is compared first with A B, and then with A C; and being pronounced equal to each, we conclude that A B and A C must be equal to each other. Here then the inference is *mediate*. Moreover, though the conclusion follows irresistibly from the premises, yet it is really different from either premiss; it is really a new truth, and consequently the whole agrees with our definition of reasoning in general,

as given in the opening of this chapter. But there are other demonstrative inferences, or at least commonly so called, which are drawn at once from a prior proposition without any proposition intervening. These are *immediate* inferences. Let us now examine them.

18. These immediate inferences are of two sorts. They are either instances of mere conversion of propositions, or they are not. Let us first examine the latter. And as I shall attempt to show that some, at least, if not all, of these apparent cases of immediate inference are not real cases, I prefer taking instances brought forward by another, namely, Mr. Bailey, author of that excellent work, "The Theory of Reasoning."

1. The lines A and B are severally equal to C.

Therefore A and B are equal to each other.

I have already shown that in this case the two propositions are equivalent to three, the first proposition being a compound one, and readily analyzed into A is equal to C, and

B is equal to C,

from which we conclude that A and B are equal to each other. Consequently, in this case, the inference is not immediate but mediate.

2. The three angles of every triangle are together equal to two right angles:

Therefore the three angles of the triangle A B C are equal to two right angles.

In this case the last proposition really comprehends two, which are,

This figure A B C is a triangle:

Therefore its three angles are equal to two right angles. In the compound proposition it is clearly taken for granted that the figure A B C is a triangle, and if taken for granted it may as well be stated. Here therefore again, the inference is not really immediate, but mediate.

3. The culprit at the bar was in Edinburgh at one o'clock on the day named:

Therefore he could not be guilty of the offence committed at that time in London.

In this case a knowledge of geography is supposed, and without this knowledge no certain inference can be drawn. We are supposed to know that Edinburgh is about four hundred miles from London, and not a suburb or part of London, like Westminster and Southwark, as it *might* be. Consequently, to supply what is tacitly assumed, we must interpose the following proposition between the two above given:

But Edinburgh is about four hundred miles from London; when the inference becomes mediate.

4. The portrait resembles two different persons;

Therefore they must resemble each other.

Here again the first proposition is a compound one, and easily analyzed. Calling the portrait A,

and the two persons B and C, then we have the argument in full thus,

A resembles B;
but A resembles C;
therefore B and C resemble each other.

5. The traveller had no money with him;
Therefore he could not be robbed of a large sum.

This inference, if it be so called, is no doubt immediate, but at the same time insignificant, giving us no additional information; and therefore, according to the definition laid down at the opening of this chapter, not a legitimate case of Reasoning. We might multiply instances of this sort without end. Philip was the father of Alexander, therefore Alexander was the son of Philip. John is brother to Sarah, therefore Sarah is sister to John. Who would call this reasoning? Reasoning may be demonstrative, or only probable; it may be sound or unsound, conclusive or inconclusive, good or bad; but it cannot be insignificant, a mere play upon words. The proper epithet for this mental amusement is *trifling*. A mere change of form does not of necessity give any new truth, and unless there be some new truth, something not really the same as any one premiss, there is no reasoning, in our sense of the word. Hitherto, then, we have not been able to find any legitimate instance of demonstrative reasoning consisting of less than three propositions, expressed or understood. Let us now

examine the other sort of immediate inferences, obtained by the conversion of Propositions.

19. Logicians inform us that propositions may be illatively converted in three ways; *Simply; by limitation* or *per accidens;* and *by negation* or *contra-position.* Let us give examples of each taken from Archbishop Whately and others.

1. No virtuous man is a rebel,
   therefore no rebel is a virtuous man.
   No Christian is an astronomer,
   therefore no astronomer is a Christian.
2. All birds are animals.
   Therefore some animals are birds.
   All men are mortals;
   Therefore some mortals are men.
3. Every poet is a man of genius;
   Therefore he who is not a man of genius is not a poet.
   All good rulers are just;
   Therefore no unjust rulers can be good, or every unjust ruler is not good.

In the first case the *Quantity* and the *Quality* of the proposition when converted remain the same as before; in the second, the *Quantity*, in the third, the *Quality*, is changed; but in all the inference is immediate and irresistible. The only question is, are these specimens of reasoning? To this we have only to answer, is any new truth contained in the converted proposition, any truth really different from that conveyed by the proposition previous to

conversion? There is certainly a difference of *form*, but difference of form alone is, as before observed, a mere play upon words, and unworthy of the name of reasoning, which professes to teach us something really new. I cannot therefore look upon these as instances of reasoning properly so called. Upon the whole, then, we have been unable to find any example of demonstrative reasoning consisting of less than three propositions, any specimen of *immediate* demonstrative inference agreeing with our definition of reasoning, and therefore entitled to the name.[e]

Should we adopt the thorough Quantification of the Predicate proposed by Sir William Hamilton, then the conversion by *limitation* or *per accidens* would disappear; for, instead of "All birds are animals," we should have "All birds are some animals," which is the true meaning; and by simple conversion, "Some animals are all birds." So, "All men are mortals" would become "All men are some mortals;" and again by simple conversion,

[e] Archbishop Whately and Mr. Mill are both of opinion that conversion, though illative, is not reasoning. "The reader must not suppose from the use of the word 'illative,' that this conversion is a process of *reasoning*; it is in fact only stating the *same* Judgment in another form."—Elements of Logic. Book II. Chap. II. Sect. 4. Note. Mr. Mill also denies that illative conversion is reasoning, because "there is in the conclusion no new truth, nothing but what was already in the premises, and obvious to whoever apprehended them."—System of Logic. Book II. Chap. I.

"Some mortals are all men." In this way the very semblance of reasoning disappears.

20. Under the head of Demonstrative Reasoning applied to Contingent matter, we are naturally brought to consider, in the last place, that famous *species*, or that *type* of reasoning, which has exercised the wits of so many generations of logicians, from the age of Aristotle downwards; and which, even in the present day, is upheld as of paramount importance by some of the ablest of men. In the whole history of Philosophy there is not a more remarkable fact than this; that thinking men are not yet agreed as to the real value of the SYLLOGISM.

21. Since the days of Bacon, however, the empire of Aristotle has gradually been going to decay, and faith in the all-sufficiency of the Syllogism has more and more been shaken. Bacon himself, in his *Novum Organum*, frequently decries the Syllogism;[f] Pascal depreciates it;[g] Descartes shows its uselessness for discovery; and Locke, with some succeeding philosophers, particularly Thomas Brown, scoffs at it altogether.

[f] See *Novum Organum in Distributione operis*, and Aph. XI. XII. XIII. XIV. and LXIII. where Aristotle is blamed for corrupting Physics by his Dialectics. See also *De Augmentis Scientiarum*. Lib. V. Cap. II.

[g] See Pascal "De l'esprit Géometrique," and "De l'art de persuader," contained in the best edition of the "Pensées de Pascal," by Prosper—Faugère, Paris, 1844.

22. But in our days an attempt has been made to restore the logic as well as the religion of the middle ages, and the same University which nursed a Newman has produced a Whately.[h] The latter has written a work chiefly to prove that the Logic of Aristotle is the only Logic, and Syllogism the only reasoning; that in fact the syllogism is not a particular *kind* of reasoning, but the *form* to which all sound reasoning may be reduced, by whatever name it be called. "A Syllogism," says he, "is no distinct kind of argument, otherwise than in form, but is, in fact, *any* argument whatever, stated regularly and at full length."[i] Thus, according to that celebrated Archbishop and Philosopher, there are no different *sorts* of reasoning, but all reasonings are alike, whether demonstrative or probable, *a priori* or *a posteriori*, Inductive or Deductive, all are exactly similar; and all, if stated regularly and at full length, are syllogistical. This Dr. Whately assumes, without any attempt to prove that Mathematical reasoning is syllogistical, or can be reduced to syllogisms. He says that it can, but he gives no proof. That Inductive reasoning is syllo-

[h] It is worthy of remark that Dr. Whately, in the Preface to his "Elements of Logic," acknowledges that the Rev. J. Newman "actually composed a considerable portion of the work as it now "stands, from manuscripts not designed for publication," and that "he is the original author of several pages."

[i] "Elements of Logic." Book IV. Chap. II. Sect. I.

gistical, he does indeed attempt, but in my opinion utterly fails, to prove.

23. No doubt there must be something common to all reasoning, or the same name *reasoning* would not have been given to the process in all cases; but had there been no differences, neither would there have been any specific names, such as *demonstrative, probable, inductive, deductive*, etc. What is common to all reasoning, what it is which makes reasoning a *genus*, we have seen in the opening of this chapter; and that account we must bear in mind during the following discussion. Wherein consist the differences which mark out several *species* of reasoning, we have also seen in part, and we shall see in full hereafter; and if these differences be real, especially the grand difference between demonstration and probability, then it will follow, contrary to the opinion of Dr. Whately, that all reasoning is not specifically the same. Consequently, unless the word Syllogism *mean* nothing more than a sound argument in general, stated in full, unless it be merely a generic word, then all sound reasoning, stated explicitly, cannot be syllogistical.

24. But in order to know what the word *Syllogism* really does mean, we must refer to the definitions which have been given of it, the examples brought forward in illustration, and the general principle said to pervade all syllogisms. When we know what a syllogism really is, then, and not till then, can we determine whether it include all reasoning, or any.

25. Let us first take Aristotle's own definition of the Syllogism, which is as follows: "A syllogism is a speech, in which certain propositions being stated and granted, some other proposition, different from these, follows of necessity; and this solely in virtue of the propositions stated."[k] And this definition is thus explained by Alexander, one of Aristotle's commentators. "But when Aristotle says, *follows of necessity*, this does not mean that the conclusion, as a proposition in itself, should necessarily be true, for this is the case only in syllogisms of necessary matter; but, *that the conclusion, be its matter what it may, actual, contingent, or necessary, must follow of necessity from the premises.*"[l]

26. Reid's definition of syllogism, as completed by Sir William Hamilton, varies a little from the foregoing, but is perfectly consistent with it. "A syllogism," says he, "is an argument or reasoning consisting (always explicitly or implicitly) of three propositions, the last of which, called the CONCLUSION, is (necessarily) inferred from the (very statement of the) two preceding, which are called the PREMISES." The only difference of importance between this definition and the other is, that here Syllogism is made a species of the genus argument or reasoning; while, according to Aristotle, it is a

[k] Prior Analytics. Book I. Chap. I.

[l] See "A brief account of Aristotle's Logic," in Sir William Hamilton's edition of Reid's works: Chap IV. Sect. V. Note.

species of the higher genus speech. Thus, by the definition of Reid, the Syllogism is only a kind or species of reasoning, while, by the definition of Aristotle, it might be supposed equivalent to reasoning in general.

27. The first observation to be made on these definitions is, that they evidently apply to demonstrative reasoning, and to it alone; for in it assuredly, and in none other, does the conclusion follow of necessity, or, in other words, is necessarily inferred, from the premises. As definitions, then, of Demonstrative reasoning, they are unexceptionable; but, for this very reason they cannot apply to *all* reasoning; for we well know that by far the greater part of our reasonings are probable only, not demonstrative. This argument may itself be stated syllogistically thus:

All syllogistical reasonings are demonstrative;
But all reasonings are not demonstrative;
Therefore, all reasonings are not syllogistic.

Take the following as a specimen:
Trade (in general) ought to be free;
Therefore, the Corn-trade ought to be free.

Is this reasoning or is it not? Is it good reasoning? Most people, I believe, will allow that the reasoning is fair, though not irresistible. From the assumption that Trade ought to be free, we are entitled to infer, *probably*, indeed, not necessarily, that the corn trade ought to be free; probably only,

because, though trade in general ought to be free, there may be circumstances peculiar to the corn-trade which take it out of the general rule. Therefore, here we have a specimen of what all would allow to be reasoning, where the conclusion does not follow irresistibly or of necessity from the premises, and which therefore does not agree with the definitions of the syllogism. Consequently, all reasoning is not syllogistical in the sense above given. But this is only a specimen of ten thousand arguments of the same kind, and therefore we must conclude in general that all reasoning is not syllogistical, as above defined.

28. The next observation suggested by the above definitions is, that little is therein said of any certain form or type of words as essential to the Syllogism, only, according to the second definition, it must consist of three propositions. And that demonstrative reasoning consists of three propositions we have already seen. Therefore the argument, A B is equal to A C, and B C is equal to A C, therefore A B is equal to B C, is a syllogism; for it consists of three propositions, and the conclusion follows irresistibly from the premises. And such are all the reasonings of pure Geometry. Consequently, it is not necessary to turn all the propositions of Euclid into syllogisms, as has been attempted, for they consist of syllogisms already. But the attempt is a proof that the word *Syllogism* has been taken by logicians in a peculiar sense, not as syno-

nymous with demonstrative reasoning in general, not as determined by the above definitions. We must then neglect the definitions, as the school logicians have neglected them, and seek for the nature of the syllogism in some other way.

29. With this view we must examine the General Principle said to pervade all Syllogisms, and the particular examples brought forward in illustration. Now dialecticians agree that the fundamental principle of all syllogisms is correctly given in the famous *dictum* of Aristotle, namely, that *Whatever is affirmed or denied universally of a class of things may be affirmed or denied of anything comprehended in that class.* This, according to Archbishop Whately, is not only the Universal Principle of the Syllogism, but of all Reasoning; for, as he thinks, all reasoning is syllogistical. What then are we to think of this Principle? Is it exemplified in all reasoning, or in any?[m]

30. In the first place, be it remarked, that this celebrated *dictum* is, in reality, no principle or axiom at all, for it affirms nothing which is not already meant by the word *Class.* It is, in fact, a definition of a class, and so a merely verbal propo-

[m] Let it not be supposed that I assert that Aristotle thought that he had discovered in this *dictum* the Universal Principle of *Reasoning.* My remark applies only to one of the most distinguished of his modern disciples, and we all know that disciples often go beyond their masters. Aristotle maintained only that the above *dictum* was the Universal Principle of *Syllogisms.*

sition; for our notion of a class is that whatever is affirmed or denied of it, may be affirmed or denied of anything included under the same. And how a mere definition can be the universal principle of reasoning, passes all comprehension. This one objection appears to me fatal to the theory.

31. But waving this objection, which meets us at the very threshold of the inquiry, and allowing, for the sake of argument, the above to be entitled to the name of a Principle, let us see whether it be applicable to all, or to any kind of reasoning. When we refer to the various sorts of relation about which reasoning is conversant, that are mentioned above, we see but one kind, at most, to which the principle of the Syllogism can be applicable, namely, relations of comprehension. This, no doubt, is a very important class, but it is only one class; and certainly not more important than relations of Cause and Effect. If A be the cause of B, and B of C, then A is the remote cause of C. This is surely reasoning, nay, demonstrative reasoning; but how the conclusion is here *comprehended* under either of the premises, I am quite at a loss to discern. And taking a less general instance, formerly produced,

Application depends upon the will;

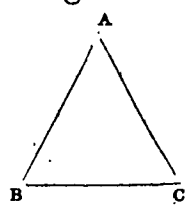
But intellectual advancement depends much upon application;

Therefore, intellectual advancement depends much upon the will.

Here it will be allowed that the conclusion

follows fairly, nay irresistibly, from the premises; but surely it is not comprehended under either of them. According to the Syllogistic theory, "Application" is here the middle term, and this is a class, under which the subject of the conclusion, namely, "Intellectual Advancement," must be brought, in order that what had previously been asserted of the former may be asserted of the latter also. But, how "Intellectual Advancement" is a particular instance, or a species, of the genus "Application," I cannot see. By the supposition, the one, "application" precedes as a cause, and the other, "intellectual advancement," follows as an effect, and therefore cannot be an instance of the former.

32. Again, taking relations of Quantity,



in the triangle A B C, if the side A B be equal to the side B C, and A C to B C, then is the side A B equal to A C. This, it will be allowed, is demonstrative reasoning; but here also the principle of the Syllogism is quite inapplicable. That conclusion follows irresistibly from the premises, but it is not comprehended under either of the previous propositions.

I am aware that an attempt has been made to

bring the reasonings of pure mathematics to the Syllogistic form. We are informed by Sir William Hamilton that there exists in the College Library of Glasgow a rare work by Herlinius and Dasypodius, namely "an edition of the first six books of Euclid in which every demonstration is developed in regular syllogisms."[n] One specimen of this we have seen above. A is equal to B, and B to C, therefore A is equal to C, becomes in due syllogistic form

What are equal to the same are equal to one another;

A and C are equal to the same (B);

Therefore A and C are equal to each other.

We have shown that it is only by compressing two propositions into one that the form of the syllogism has been obtained; and that stated in full the argument would stand thus,

What are equal to the same are equal to one another;

A is equal to B;

And C is equal to the same B;

Therefore A and C are equal to each other.

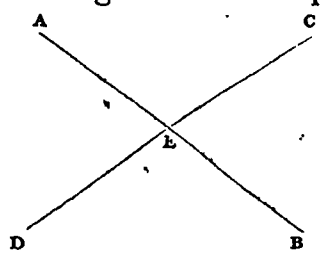
Where the utter uselessness, the impertinence of the first proposition is evident; for, *take it away, and the proof is still perfect.* This may serve as a specimen of the mode of developing mathematical arguments in syllogisms. It can be done only by

[n] See Sir William Hamilton's Notes to Reid's "Brief Account of Aristotle's Logic." Reid's Works, p. 702.

introducing a number of general propositions of no use whatsoever to the proof, and consequently forming no part of the proof; mere excrescences or wens upon the smooth surface of mathematical reasoning. The philosopher of Laputa, who spent his time in attempting to extract sunbeams from cucumbers, was quite as profitably employed as Herlinius and Dasypodius in developing (as the phrase is) the propositions of Euclid in Syllogisms.

Nevertheless we allow that there is one case in which the syllogism is applicable to the demonstrations of Euclid, and that is where an universal proposition, formerly established, is referred to as the ground of a new proposition. And in order to exemplify this case, as well as the more numerous cases where the syllogism is not applicable, we shall analyze a proposition of Euclid. Any one almost might answer the purpose; but we shall take the fifteenth of the First Book as short and simple.

If two straight lines cut one another, the vertical or opposite angles shall be equal.



Because the straight line A E makes with C D, at

the point E, the adjacent angles C E A, A E D,

These angles are together equal to two right angles (Prop. 13.)

Again, because the straight line D E makes with A B, at the point E, the adjacent angles A E D, D E B,

These angles also are equal to two right angles;

But the angles C E A, A E D have been shown to be equal to two right angles;

Wherefore the angles C E A, A E D are equal to the angles A E D, D E B.

Take away from each the common angle A E D, and the remaining angle C E A is equal to the remaining angle D E B (ax. 3).

In the same manner it may be demonstrated that the angle C E B is equal to the angle A E D.

The Theorem begins by referring to a proposition, formerly proved, the 13th, as the foundation of the present argument, and consequently that proposition may be stated in full.

1. The angles which one straight line makes with another straight line, upon one side of it, are either two right angles, or are together equal to two right angles.

But the straight line A E makes with C D, at the point E, the adjacent angles C E A, A E D;

Therefore these angles are together equal to two right angles.

Here it is clear that we have a formal syllogism, and the axiom exemplified is that *de omni et nullo.*

2. The same may be said of the second argument, which is exactly similar to the foregoing.

3. The angles C E A and A E D have been proved equal to two right angles;

And the angles A E D, D E B have also been proved equal to two right angles;

Therefore the angles C E A, A E D together are equal to the angles A E D, D E B together.

Here there is no universal proposition, all is particular; neither of the premises is entitled to be called the major in preference to the other; and consequently there is no syllogism technically so called, no syllogism of the Schools; but the axiom exemplified is "Things which are equal to the same are equal to one another."

4. The angles C E A, A E D are equal to the angles A E D, D E B;

And the angle A E D is common to both;

Therefore the angle C E A is equal to the angle D E B.

Here again, as in the last case, all is particular, and therefore there is no Syllogism proper: but the axiom exemplified is, "if the same be taken away from equals the remainders are equals."

The only observation to be made on the above is, that the Syllogisms at the head of the Theorem establish no new truth; they only recall and formally enunciate what we know from a previous Theorem; they make us sure of our old ground, but they do not advance us one step. And this will

be found to be the utmost scope of the Syllogism.

33. It appears, then, from the acknowledged general Principle of the Syllogism, and from the particular instances of demonstrative reasoning now given, adapted to both necessary and contingent matter, that the Syllogism of the Schools is not applicable to Demonstrative Reasoning in general. And as the inference in Syllogism, if inference it be, is irresistible, therefore it cannot be applied to probable reasoning at all. Consequently, so far is it from true that the Syllogisms of the Schools is the perfect type or form of all reasoning, that, at most, it can be only the type or form of one kind or variety of Demonstrative reasoning. The importance of the Syllogism, then, to say the least, has been prodigiously overrated.

34. Before proceeding farther, it may be well to state accurately what has already been proved.

1. That the Syllogism, being a form of Demonstration, cannot be applicable to probable reasoning, that is to the greater part by far of all our reasonings.

2. That it is not applicable to *all* demonstrative reasoning, neither to all demonstrative reasoning about necessary matter, nor to all demonstrative reasoning about contingent matter; in other words, neither to all reasonings about Quantity, or Mathematical reasoning, nor to all demonstrative reasonings about matter of fact.

3. That it *is* applicable to *one* case of mathematical reasoning, that where an universal proposition, formerly proved, becomes a premiss of a subsequent conclusion; a case, however, so clear as scarcely to require reasoning at all, where nothing is proved, but only a formal statement made of what has been proved, a formal statement, moreover, which even Euclid does not think necessary. It remains to be seen whether the Syllogism can in *any* case be applied to Contingent matter. That it cannot, seems probable *a priori*; for where are we to look for *universal* propositions in matters of fact? but if it be applicable, it will in all likelihood be found to apply only to such a case as that above, where we are merely reminded of what we know already. Let us examine actual instances of reasoning, however, in order to settle this point.

35. Agreeably to the fundamental principle of all syllogisms, as given above, it would appear, that to relations of Comprehension, if to any, the Syllogism must apply; for the principle is, that what is true of a class, is true of all individuals or all species comprehended under that class. To class-reasoning then, as tracing relations of comprehension, a species of demonstrative reasoning, the Syllogism may be applicable.

36. Observe that, in reference to reasoning, there are two questions to be solved, the one purely psychological and speculative, the other

logical and practical: the first, what is actually the process which goes on in our minds in reasoning? the second, can any form or type be invented whereby we may test the validity of all arguments, or of any one sort of argument? Each of these questions must be treated separately.

37. This distinction may be illustrated by reference to Ethics, in which also there are two grand questions; the one, what are the Causes present to the mind which actually regulate our moral sentiments? The other, what are the circumstances which justify us, on mature reflection, in awarding approbation and disapprobation to any action? The former question, which is speculative, relates to the origin of our moral sentiments; the latter, which is practical, to the test or criterion of morality. No little obscurity has arisen from confounding these two questions.

38. The first question then is, whether the Syllogism be a full statement, founded on a correct Analysis, of the mental process in any kind of Reasoning, more especially in that which we have called class-reasoning? Having already mentioned the general principle of the Syllogism, let us now bring forward some examples.

1. Whatever exhibits marks of design had an intelligent Author.

   The world exhibits marks of design:

   Therefore the world had an intelligent Author.

2. All tyrants deserve death.
   Cæsar was a tyrant:
   Therefore Cæsar deserved death.
3. Every dispensation of Providence is beneficial.
   Afflictions are dispensations of Providence:
   Therefore they are beneficial.
4. Every creature possessed of reason and liberty ought to practise justice.
   Man is a creature possessed of reason and liberty:
   Therefore he ought to practise justice.
5. No vicious man is worthy of esteem and reward.
   John is a vicious man:
   Therefore John is not worthy of esteem and reward.
6. No tyrannical government is good.
   The Turkish government is tyrannical:
   Therefore it is not good.

These are instances of regular Syllogisms, in the first *Figure*, to which, as we are told by Aristotle and his followers, all legitimate syllogisms may be reduced. Here the middle term is the subject of the Major, and the predicate of the Minor proposition.* We shall also give a specimen of the second and of the third figure.

* The first three instances are taken from Whately's Logic. The first, in particular, is his favourite specimen. In the Prior Analytics, Book I. Chap VII., Aristotle proves that all syllogisms

7. Whatever is bad is not the work of God.
All the natural passions and appetites of men are the work of God;
Therefore they are not bad.

In this case the middle term "The work of God" is the predicate of both the Major and Minor propositions, or the Syllogism is of the second *Figure.*

8. All Africans are black.
All Africans are men;
Therefore some men are black.

Here the middle term is the subject of both the Major and Minor, or the Syllogism is of the third *Figure.*

39. These instances may suffice to show us the nature of syllogisms. In all, the conclusion is evident, *provided the premises be granted*, and in all, the validity consists in the same thing, which, when stated generally, constitutes the *dictum* above mentioned; namely, that whatever is affirmed or denied *universally* of any class of things, may be affirmed or denied of anything comprehended in that class. In framing the argument, then, the object is to refer the subject of the conclusion to some class, (middle term) of which class something can be affirmed or denied universally. Thus in the first Syllogism, the subject of the conclusion "the world" is referred

may be reduced not only to the first figure, but to the two universal moods of the first figure, either *directly* by conversion, or *indirectly* by *reductio ad absurdum.*

to a class of things "those which exhibit marks of design," of which it can be universally affirmed that "they had an intelligent Author." And so with the rest.

40. Now the question is, do men actually reason thus? That they do not openly or apparently so reason, every one's experience may convince him. Taking each of the six syllogisms in the first figure, to which form the other figures may be reduced, we shall see that in every case the natural or usual way of reasoning would be confined to the second and third propositions, omitting the first. In order to prove that the world had an intelligent Author, none but a dialectician would think of beginning by stating "Whatever exhibits marks of design had an intelligent Author"; but an ordinary reasoner would say,

The world exhibits marks of design.

Therefore it had an intelligent Author.

And so in the other cases.

But though not expressed, is not the first or major proposition understood? mentally embraced, though not stated in words? There lies all the question.

41. Were it granted that the Major proposition is necessary to the perfection of the proof, still this would not establish the fact that men actually reason thus; for the present question is not how men *ought to* reason so as to arrive at demonstration, but how they *do* reason. And that men

commonly content themselves with arguments short of demonstrations we all know. Moreover, that in the above instances men would reason from the minor alone, and in so reasoning would be thought to reason fairly, though not irresistibly, cannot be doubted. Where then is the proof that the major, an universal proposition, is tacitly assumed by the reasoner, and supposed by the listener. There is no proof whatsoever, except that the logician thinks that the said proposition is essential to a demonstration; and, so thinking, he wishes to make men reason better than they commonly do. Let us examine the six instances and see whether the major proposition be necessary to a legitimate argument, an argument short of demonstration.

42.—1. Whatever exhibits marks of design had an intelligent Author.

The world exhibits marks of design.

Therefore the world had an intelligent Author.

Here we may safely assert that the Major is altogether useless. When we say that the world exhibits marks of design, we in fact assert that it had an intelligent Author. We cannot say that there is here any inference at all. To affirm that the world exhibits marks of design, or marks of a designer, or marks of an intelligent Author, is all one in meaning, with a variety only in expression. We cannot even conceive design without a designer, or without an intelligent being. As we have already shown, when we allow design, we already allow a

designer, we do not infer one. A Major, or universal proposition, cannot therefore be required to establish an inference, seeing that no inference is made. But were we to grant that the conclusion "the world had an intelligent Author" contains something really different from the minor "the world exhibits marks of design," still, the inference from the minor would be self-evident and irresistible. No Major could add to its force. So close indeed is the connection between them, so intimate the relation, that we consider them as one proposition, or at least as one assertion with a slight variety of form.

2. All tyrants deserve death.

Cæsar was a tyrant.

Therefore Cæsar deserved death.

Here the connection between the Minor, and the conclusion is by no means self-evident; and some *general* proposition does seem necessary to establish the conclusion. But, in order to prove, we must beware of assuming the very point in debate, and this we should do were we to assert that *all* tyrants (Cæsar included), deserve death. The utmost that we can assume is that tyrants *in general* deserve death; and from this we may argue, probably indeed, not demonstratively, that Cæsar deserved death. This, indeed, is a question quite out of the range of demonstration; men's minds have been much divided upon it; and therefore it can be only by a trick that it puts on a demonstrative form. As few men, if any, would maintain that all tyrants

without exception deserve death, they cannot be supposed to reason from a proposition which they do not hold.

3. Every dispensation of Providence is beneficial.

Afflictions are dispensations of Providence;
Therefore they are beneficial.

Here again we allow that some *general* proposition is necessary to establish the conclusion; but, as in the last instance, by assuming too much we prejudge the question; we assert, we do not reason. Religious men will freely allow that the dispensations of Providence are on the whole beneficial, and that *therefore* even afflictions may have their use; but they do not make a sweeping assertion like the one above, which would do away with all distinction between good and evil, happiness and misery. Logicians alone make such assumptions, in order to give a demonstrative air to their arguments; and they care not how absurd the whole may be, provided it be a proper Syllogism.

4. Every creature possessed of reason and liberty ought to practise justice.

Man is a creature possessed of reason and liberty;
Therefore he ought to practise justice.

Here, as before, the conclusion is evidently assumed in the Major, and therefore the reasoning is only apparent. That men from a due consideration of reason and liberty might arrive at the con-

clusion here given is probable enough; but they certainly would not begin by assuming the final result of their researches.

5. No vicious man is worthy of esteem and reward.

John is a vicious man;

Therefore John is not worthy of esteem and reward.

In this instance, the uselessness of the Major is evident; for, if John be a vicious man, it would be a direct contradiction to our notion of Vice to suppose that he could be worthy of esteem and reward.

6. No tyrannical government is good.

The Turkish government is tyrannical;

Therefore it is not good.

Here, the uselessness of the Major is quite as evident, if possible more so, for a tyrannical government *means* one that is not good. At least that is a part of the meaning, and not an inference. If we assert that the Turkish government is tyrannical, we assert that it is not good; no argument is required to prove it; and if no proof be wanted, of what use can be the Major? [p]

43. Having now examined each of these six Syllogisms, given as specimens by writers on Logic, we find that in no one case would men

[p] Let not the reader suppose that I first made the above Syllogisms, and now criticise my own work. They are all the work of others. The first three, as before stated, are taken from Whately's Logic.

naturally reason thus; that in some cases there is scarcely any thing that can be called an argument, certainly none requiring a major proposition; while in others though a *general* proposition may be assumed openly or tacitly, yet an *universal* proposition neither would nor could be taken for granted. For we find that the major is always an *universal* proposition; and this, in fact, is one of the laws of the first figure; as it is of Syllogisms in general that one of the premises must be universal. Unless this be the case, no infallible inference can be drawn. If the major proposition be universal, it *must* embrace the conclusion, for this is only a particular instance of the same. Consequently, by assuming the major, we assume the conclusion, or, in other words, our first proposition takes for granted the very thing to be proved. And this, we are told, is the only legitimate mode of reasoning! Certainly, of all the delusions that ever passed current in the learned world, this is the greatest, for it is a delusion not peculiar to common minds, but shared, even now, by some of the highest names in philosophy, It is engendered between reverence for antiquity in general, and respect for Aristotle and Greek more particularly; and in many instances it has proved too strong, not only for common sense, but for high imtellectual powers. On that account it is the more important that the delusion should be expelled.

44. Aristotle shows (Prior Analytics. Book I. Chap. XXIV.) that unless one of the two propositions which compose the premises be universal, there can be no Syllogism. "Thus," says he "if we have to demonstrate that music is a dignified pleasure, if we state only that pleasure is dignified without saying *all* pleasure, there is no Syllogism." Strange that this acute philosopher should not have put the question to himself, if all pleasure be dignified, what occasion is there for reasoning to prove that the pleasure of music is so! That question once fairly answered, he might have spared himself the trouble of writing the Prior Analytics, a mighty monument of useless ingenuity. This instance also shows what unwarranted assertions must be made in order to obtain a formal syllogistic proof; for who would really maintain that "all pleasure is dignified?"

45. To these objections to the Syllogism, it may, however, be replied: that the major proposition embraces the conclusion is not denied, nay unless it do, there can be no demonstration; and the very object of the reasoning is to show that the conclusion is so comprehended. But what we assert is, that no reasoning is required for this purpose. The fact is self-evident. There is nothing new in the conclusion, nothing not already affirmed in the premises, only the substitution of the particular for the universal, and whosoever allows the latter allows the former. Therefore

the above specimens of Syllogism and others such as are usually found in books of Logic, in all the varieties of figure and mood, do not answer to the definition of reasoning in general, given at the opening of this Section, nor even to that of syllogism as delivered by Aristotle himself, which we found to be applicable to demonstrative reasoning without reference to any particular form, namely, that "it is a speech in which certain propositions (the premises) being stated and granted, some other proposition, (the conclusion) *different from these*, follows of necessity), and this solely in virtue of the propositions stated." Now, we see that the Syllogism, constructed according to the rules of figure and mood, and in agreement with the *dictum* of Aristotle *de omni et nullo*, as it is called, really bring out in the conclusion nothing different from the premises. Therefore they do not correspond with the above definition. That is a definition of perfect or demonstrative reasoning in general, and if we please to call it syllogistic, well and good, but then we must remember that the definition does not apply to the Syllogism properly so called, the Syllogism of Aristotle and the Schoolmen, which alone we are now considering. In this last, the connection between the premises and the conclusion is no doubt irresistible, because the latter is assumed in the former; but for that reason it can contain nothing new, nothing different. Not so in real

and perfect reasoning, such as that of Geometry, where the conclusion not only follows irresistibly from the premises, from both together, but where it also contains something different from either.

46. "Wherein consists this admirable discovery of the Syllogism" asks Barthélemy de Saint Hilaire, in the Preface to his Translation of Aristotle's Organum? "In this," answers he "that Aristotle first established that reasoning was possible on the one condition alone of starting from a Principle, to arrive by the aid of a middle term at a conclusion resulting necessarily from that principle." According to this statement, there can be none but demonstrative reasoning; *first mistake.* Again, by this, the conclusion in demonstrative reasoning follows necessarily from the Principle, as Saint Hilaire calls it, or Major proposition; whereas, in mathematical reasoning it follows not from one of the premises alone, but from both together; *second mistake!* In the simple reasoning A is equal to B, and B to C; therefore A is equal to C; the conclusion follows not necessarily from either of these premises, but from both together, and the one is no more entitled to be called a *Principle* than the other. It is only in the fictitious reasoning of the Syllogism that the conclusion follows necessarily from the Major proposition, because *in that proposition the conclusion is taken for granted beforehand.* It may be remarked that Logicians of a certain class

are often at war with Mathematicians. No wonder, for no science so clearly refutes the absurd pretensions of the School Logic as Mathematics.

47. Nothing is more remarkable than the utter disregard of observation on the part of the School Logicians. Having adopted from Aristotle the Syllogistic theory of reasoning, they boldly assert that it applies to all arguments; but the least observation upon real discourse is sufficient to refute this opinion. Still, in spite of daily, of hourly experience, they go on repeating the assertion, which, to say the least, is a prodigious exaggeration. The School Logic is one instance of that system of philosophizing which prevailed generally among the ancients, as well as in the middle ages, down even to the time of Bacon, a system which, despising experience, pretended to deduce everything from a few very general Principles. Such was the system of Plato, and even of Aristotle in many of his works, though in his Politics and his Natural History he has condescended to examine facts.

48. The utmost that can be allowed in favour of the Syllogism is, that there may be cases where we should grant an universal Proposition more readily than a particular one comprehended under it, and where therefore it might be well to remind us of what we already admit. But, recalling what we already know, and reasoning from the known to the unknown, are surely different operations.

A Syllogism may strengthen, but it cannot originate Belief; and therefore it can lead to no discovery. Our Belief in the existence of the material world certainly requires no strengthening, it is instinctive and indelible; yet, it may be satisfactory to give it the sanction of an universal principle, as in the following Syllogism, which seems a more favourable specimen than what we generally meet with.

Whatever is universally believed is worthy of credit.

The existence of the material world is universally believed:

Therefore it is worthy of credit.

If we choose to call this reasoning, be it so, provided we be fully aware what sort of reasoning it is; demonstrative in form, because we always allow the conclusion when we assume the premises, but, for the same reason, utterly barren of new truth, and, at most, confirming what we already know. If reasoning be the process of drawing a conclusion, which before was unknown, or at least dark or doubtful, from some propositions known or more evident, then the above syllogism does not answer to this definition, for there the conclusion was surely as certain beforehand as the premises. Nay, it is easier to doubt whether universal consent be a sure ground of belief, than to doubt the existence of the material world. The only valid argument whereby we can

justify this and other cases of Instinctive belief is, that we have here no reason to doubt; that we have no reason to believe that Nature perpetually deceives us, that she is a great cheat. But this argument cannot be put in the form of a syllogism, because we cannot positively assert that she *never* deceives us.

49. That such is the narrow province of the syllogism is allowed even by its most strenuous and indiscriminate supporters. "Since all reasoning (in the sense above defined), may be resolved into syllogisms, and since even the objectors to Logic make it a subject of complaint that in a syllogism the premises do virtually assert the conclusion, it follows at once that no new truths (as above defined) can be elicited by any process of reasoning."[q] Thus, in order to maintain the Syllogistic Theory in all its extension, we must contract excessively the province of reasoning in general, nay, we must allow that no new truths can be elicited by reasoning! If this be not a *reductio ad absurdum*, what is?

50. The only use of reasoning, then, as we are told, is "to expand and unfold the assertions wrapt up, as it were, and implied in those with which we set out, and to bring a person to perceive and acknowledge the full force of that which he has admitted; to contemplate it in various points of view, to admit

[q] Whately's Logic, Book IV, Chap. II.

in one shape what he has already admitted in another, and to give up and disallow whatever is inconsistent with it." [r] This may be allowed to be a correct account of the value of the Syllogism, but, as a theory of reasoning in general, it is, *pace tanti viri*, quite monstrous. According to this theory, when Pythagoras established by reasoning, that, in any right-angled triangle, the square of the side subtending the right angle is equal to the squares of the two other sides together, he made no discovery, he only unfolded what was before wrapt up in some mathematical axiom or axioms common to him and other men. Must we then allow that the above famous proposition is as much contained within the axiom, "Things which are equal to the same are equal to one another," or some other similar, as that the proposition "James is mortal" is contained within "All men are mortal"? No one, not blinded by system, will maintain such a doctrine for a moment. But the syllogistic theory was to be supported, even at the expense of reasoning, which required to be depreciated in order to suit an artificial and futile system.

51. We are told that no "New truths can be elicited by any process of Reasoning." By what then *can* discoveries be made? By Observation no doubt, for that is the only other way. But no discovery of general truth can be made by Obser-

[r] Whately's Logic, Book IV, Chap. II.

vation alone. If I go into a new country, such as the interior of Africa, I may certainly make discoveries in geography, that is, particular discoveries, by simple Observation; but Observation alone cannot generalize, cannot discover any general truth. Consequently, as general truth can be discovered neither by Reasoning nor by Observation, it follows that it cannot be discovered at all. Once more, is this, or is it not, a *reductio ad absurdum.*

52. To say that discoveries cannot be made by Reasoning alone, but by reasoning combined with Observation, is incorrect, for the discoveries of pure Geometry are altogether independent of Observation. Some Observation no doubt must precede all reasoning about matter of fact; but very limited Observation may suggest an important discovery. When Archimedes made his famous discovery of the mode of determining the specific gravity of solids, was it not by Reasoning chiefly that he made it, by reasoning from one simple fact, the overflowing of the water of a bath? The very same fact might have been observed by thousands of others, but he alone could draw an inference from it. Is it not then correct to say that it was by Reasoning chiefly that he made his discovery?

The same may be said of Natural Philosophy in general. The facts from which it proceeds are but few in number, a few laws of motion in solids and in fluids, and on these it builds a vast structure by reasoning alone.

53. But as reasoning is depreciated in order to suit the syllogistic theory, so are the truths of pure Mathematics. We are told that all the propositions of pure mathematics are what Locke calls "trifling," wherein the predicate is merely a part of the complex idea implied by the subject. Thus, when we assert, taking the above example, that in a right-angled triangle the square described on the side which subtends the right-angle is equal to the two squares described on the sides containing the right angle, we state merely a trifling proposition, one included in the meaning of the subject, square of side subtending the right-angle of a right-angled triangle. But did any man ever suppose that the Predicate, namely, equality with the squares of the other two sides, was included in the *meaning* of that Subject? If so, why was so much reasoning required to prove it; or why was it looked upon as a great discovery? The supposition is evidently preposterous.

54. Again, the truths of pure mathematics are represented by the same Author as in conformity not with the nature of things, but only with our own definitions, and therefore as comparatively insignificant. But this objection to the importance of Mathematics we have already answered in full. Suffice it here to repeat that it is based on two mistakes, on one or both, as it may happen. By the first, pure Mathematics, the Science of Quantity, is confounded with Physics, as when it is said that the truths of Mathematics agree not with the

nature of things *i.e.* of material things. No one asserts that they do, any more than that the nature of mind agrees with that of matter. But the truths of pure Mathematics are of a higher order than those of Physics, for they are necessary and eternal, instead of contingent and possibly mutable in time; and though Quantity depends not upon matter, yet, as it does exist also in matter, thus the truths of pure Quantity become applicable to Quantity in matter, with some corrections derived from Experience. Hence the whole fabric of Mechanical Philosophy and Physical Astronomy, which attest the practical applicability of Mathematics. Accordingly, though at Cambridge and in other universities Mathematics may be studied chiefly as a mental exercise, yet they also form an important part of the education of practical men. In Commercial Schools and Institutes for the working classes, mathematics constitute a principal branch of instruction.

The second mistake lies in supposing that the definitions of Mathematicians are arbitrary inventions, with nothing corresponding to the things defined, baseless as the fabric of a vision. But, in truth, there is nothing arbitrary but the Names, line, triangle, circle, etc. The words whereby these names are defined may also vary a little; but of the Things, the Universals, we have conceptions the most fixed, clear and definite, and

they are most important, for by means of these abstract conceptions and their relations we can not only measure the earth on which we tread, but determine the distance and size of the sun and planets. This second mistake seems to have arisen out of the first; for, it being allowed that nothing *exactly* corresponding to the lines etc. of pure Geometry exists in matter, it was thence inferred that they must be visionary and the whole Science hypothetical. But so it is, while Metaphysicians dispute about the foundation of human knowledge and some would cut away all solid foundation, Mathematicians raise fearlessly a pyramid of Science reaching from Earth to the Heavens, which bids defiance to all assaults.

55. Before me, the Author of the Philosophy of Rhetoric, as well as Dr. Thomas Brown, objected to the Syllogism, as necessarily involving a *petitio principii*. Dr. Whately does not attempt to prove the contrary; but he answers that the same objection "*lies against all arguments* whatsoever."* All arguments involve a *petitio Principii!* Am I wrong then in saying that all reasoning is depreciated in order to suit an artificial and futile system?

56. One question only now remains. Though the Syllogism be not an accurate explicit statement, derived from a correct analysis of the pro-

* The words in Italics are so printed in the original.

cess of reasoning in general, is it of any use as a *test* or *criterion* of the validity of an argument? In other words, though false metaphysically, can it serve any purpose logically? If the Syllogism be not a full and accurate statement of the mental process in reasoning generally, there is surely a strong probability *a priori* against its universal logical utility. But let us examine particularly the facts of this question.

57. That the Syllogism of the Schools can be of any use as a test or criterion of mathematical reasoning, is absurd; for we have seen that the Syllogism, so understood, is not applicable to it at all, and moreover, mathematical reasoning requires no criterion. Its accuracy or inaccuracy is self-evident. The same may be affirmed of demonstrative reasoning in general, whether applied to necessary or to contingent matter. In either case, it requires no test of validity. When we say *demonstrative*, we in fact allow that the reasoning demands no Criterion, that it speaks sufficiently for itself.

58. To Probable reasoning, then, if to any, the Syllogism may be applicable as a test. But, the Syllogism being itself a form of demonstrative reasoning, how can it apply to probable arguments? We answer that it may show the hollowness of many arguments which pretend to demonstration, arguments which appear demonstrative, exactly because they are syllogistical. These

arguments may pass current because we do not see all that has been *tacitly* assumed; but when *openly* stated as a Syllogism, the imposture becomes evident. Instead of reasoning from a *general* principle and deducing a probable inference, as he ought, the writer or speaker has assumed an *universal* principle, and deduced from it an infallible inference accordingly. Therefore, though the *inference* be correct, the *conclusion* may be false. The syllogism shows openly what has been taken for granted, and that, *unless* such a preliminary proposition be true, we cannot be quite sure of the conclusion. This seems to me the exact value of the syllogism, which is applicable only to that species of probable reasoning which most nearly resembles it, namely, reasoning from a *general* principle; for the precise difference between the two, between the artificial and spurious, and the natural and genuine argument is, that the one is based on an *universal*, the other on a *general* principle. Thus the Syllogism serves as a specimen of an argument demonstrative in form, but deceptive or futile in reality; and if any actual argument can be brought into that form, we shall see clearly that it is deceitful or trifling, that the pretended demonstration is a sham, the conclusion possibly a falsehood, if not a truism.

59. To illustrate the use to which the Syllogism may be applied, as a test of probable and

general, or deductive reasoning, I shall bring forward Hume's famous argument against miracles. This argument is contained in a single sentence, and it may be easily reduced to the form of a Syllogism in the first figure; and for that very reason it is deceptive. "A miracle is a violation of the laws of nature; and as a firm and unalterable experience has established those laws, the proof against a miracle from the very nature of the fact, is as entire as any argument from experience can possibly be imagined." In due syllogistic form the argument would stand thus:

> Whatever is opposed to a firm and unalterable experience is unworthy of credit.
>
> But a miracle (being a violation of the laws of nature) is so opposed:
>
> Therefore a miracle is unworthy of credit.

The most obvious fallacy here lies in assuming, in the minor premiss, that there is a *firm* and *unalterable* experience against a miracle; for there exists a great deal of testimony in favour of miracles, testimony even of eye-witnesses, as we have reason to believe; and until it be proved that all this testimony is false or vain, it cannot be assumed that there is an invariable experience against them: for testimony is indirect experience, and upon it by far the greater part of our knowledge depends. Even the major premiss may be contested. To experience really firm and unalterable

no one can pretend, for this supposes a knowledge of every event bearing upon the subject, in every age, and in every country, since the creation. All, then, that can be meant, is the experience of ourselves, our ancestors, all whom we have known, heard, or read of; agreeably to which, those born and bred in the torrid zone, who have never wandered from thence, nor read of other climates, ought not to believe in ice. In this case, we should say that disbelief is the effect of ignorance; why then not allow the possibility of a similar influence in our own case? Are we all-knowing, all-wise? Is not our experience after all very limited? Our experience of Effects, much more our knowledge of Causes?

> There are more things in heaven and earth, Horatio,
> Than are dreamt of in your philosophy.

Though there may be a great deal of deception in Mesmerism, yet enough remains to show that we must admit some facts contrary to all our former experience.

In truth, there is scarcely any *universal* proposition that may not be contested, and therefore dialecticians have been obliged, in order not to expose the hollowness of their art, to have recourse to trifling examples, such as, "All men are mortal" "James is a man" "therefore James is mortal," "All men are sinners" "John is a man" "therefore John is a sinner"; where they

knew that the major could not be disputed. Aristotle was more wary, for he stuck to letters, and thus concealed the insignificance of examples.

60. Thus the major proposition of the Syllogism is, in general, either a truism, or an unwarranted assumption; and therefore, though the inference be irresistible, yet the conclusion must be either trifling or uncertain. If the argument of Hume had not laid claim to infallibility, it could not have been reduced to the form of a perfect Syllogism. It would have remained a good, but an obvious argument, namely, that, prior to the examination of the particular fact, there is a probability, nay, a strong probability, against any one miracle, on account of the general uniformity of nature. But *general* experience could not answer the purpose of an infallible conclusion; and therefore *unalterable* or *universal* experience was assumed; and it is exactly by reason of this assumption that the argument becomes reducible to a Syllogism, and, as a demonstration, is deceitful. This may serve as a specimen of the only use which can be made of the Syllogism. It may be useful, not as presenting a perfect specimen of reasoning to be copied, but as exhibiting a futile or deceptive sort of argument to be avoided, an argument possessing the form without the power of demonstration.

61. The grand error which lies at the bottom of the syllogistic theory is the belief that relations

other than those of Quantity admit of demonstration, not only occasionally, but as a general rule. To justify this opinion, a form of reasoning was invented, (for *invented* is the word) whereby the appearance, and only the appearance of infallibility was given to an argument, by assuming *universal* instead of *general* propositions. This is the precise difference between the ordinary or natural mode of reasoning, that is, of probable and general or deductive reasoning, and the artificial or syllogistic. We may reason from general propositions, that is, we may attempt to show that any particular case is comprehended under a general truth; but we cannot reason from universal propositions; for these obviate the necessity of reasoning. We reason in order to prove something not known before, to clear up something dark or doubtful, but if the conclusion be already known, be already clear, why reason? In every case of legitimate syllogism, where the conclusion is true, it was quite as well known beforehand, as the premises; as is proved by all the instances brought forward in books of Logic. The very perfection of the proof in a regular syllogism shows the futility of the argument: for we know that the subjects to which the syllogism is usually applied admit very sparingly of demonstration; and consequently, the perfection may be presumed to be only apparent, and therefore the result of a trick. Now this trick, as we have seen, is assuming the

conclusion in the premises. If indeed the conclusion be false or doubtful, it cannot have been *known* beforehand, and here therefore there will be something more like a new truth brought out by reasoning. But the inference being irresistible, if the conclusion be false or doubtful, some unwarranted assumption must have been made, an assumption *virtually* embracing the conclusion, but, it may be, not *evidently* embracing it, as it does when the major and the conclusion are both true, both trivial. Here, therefore, there will be something more like a real argument; though a fallacious one. To recur once more to Hume's argument against miracles, stated as a Syllogism; the conclusion is certainly startling and new, and it is not evidently comprehended under the Major without the aid of the Minor; and therefore it is no futile and trifling argument; but it is deceptive, because unwarranted assumptions have been made in both Major and Minor. Thus, though the Syllogism can never serve to find out truth, it may be used to propagate error. It cannot serve to find out truth, because the conclusion, when true, is quite as well known beforehand as the major premiss; but it may be used to propagate error, by assuming universal and unwarranted propositions, and deducing false or doubtful conclusions from them by demonstrative inference. And these conclusions will be the more dangerous, because they *seem* to be proved demonstratively, like Hume's conclusion about miracles.

62. That a system of Logic raised on such a basis should so long have stood its ground, and that, even at the present day, it should have eminent supporters, is certainly one of the most extraordinary facts in the history of the human mind. To the name, the truly great name of Aristotle, must chiefly be attributed this long delusion; a man distinguished in so many branches of science, in Metaphysics, Ethics, Politics, Rhetoric, Criticism, and Natural History; the tutor of Alexander, the founder of the Peripatetic Philosophy. Assuredly the writings of Aristotle have shed a light upon the world, but the great power of the Philosopher is chiefly shown in this, that he bewildered it so long.

63. We may conclude this subject with one or two examples to show the difference between the Syllogism and that species of ordinary or natural reasoning which it most resembles. Suppose that either by induction or otherwise we have arrived at the general proposition, that

Trade ought to be free.

we may thence infer directly, that

The Corn-trade ought to be free.

Here the conclusion follows from the premises, follows probably, but not infallibly; for the proposition "Trade ought to be free" though *general*, is not stated as *universal;* and therefore there may be circumstances peculiar to the Corn-trade which make it an exception to the rule. Now this is the

natural mode of reasoning, But, if we wish to convert this into a Syllogism, we must state the argument thus:

All Trade ought to be free.
The Corn-trade is a trade;
Therefore it ought to be free.

Here, by assuming too much, we make the argument insignificant, for we assume the conclusion in the major premiss. It is a fair argument to infer, because trade in general ought to be free, that the Corn-trade ought to be free; it is an argument drawn from a general proposition or a general principle, as the common phrase is; but it is no argument to say that the Corn-trade ought to be free, because *all* trade ought to be free. This is simply a begging of the question; it is to say that there can be no dispute about the matter, that it has been already decided. In the above syllogism, it is evident that the minor proposition is a *trifling* one, pure tautology, wherein the predicate is merely a part of the complex idea implied by the subject. This, then, is a proof that in order to maintain the Syllogistic form, trifling propositions must sometimes be inserted.

64. Take another instance. Our general proposition may be,

A local legislature is advantageous to a country; whence we may infer, that
A local legislature in Ireland would be advantageous to that country.

This again is a fair argument; but, as the proposition pretends not to universality, there may be circumstances peculiar to Ireland which render the general rule inapplicable; or, on the contrary, there may in this case be circumstances which render a local legislature peculiarly desirable. When brought to the form of a Syllogism, the argument becomes as follows:

Every country is benefited by a local legislature.
Ireland is a country;
Therefore, Ireland would be benefited by a local legislature.

Here, as before, it is evident that, by assuming too much, we do away with the argument altogether. We prove nothing, we show the probability of nothing, we suppose the question already settled.

Once more; supposing ourselves convinced of the truth of this general proposition, that the laws ought to favour the equal partition of property among all the children of a family, daughters as well as sons, it may still be a question whether there be any circumstances peculiar to land which justify an exception: but, if we begin by an universal affirmation, that *all* property ought to be equally divided, there is an end at once to reasoning.

65. So far concerning the Syllogism of the Schools, the insuperable objection to which is, that it represents Reasoning as something demonstrative in form, frivolous in reality; that, under the semblance of a perfect or infallible argument, it, in fact, does away with all argument.

66. When I consider the reasons on which this conclusion is built, they appear to me so clear and cogent that here I could rest in full conviction. But when I reflect on the fact, that, for many ages, and throughout all civilized Europe, the Syllogism was adopted, and that still some of the greatest thinkers defend it, I am almost tempted to fall back into scepticism, and to discard metaphysics and logic altogether, as destined perpetually to puzzle, never to satisfy mankind. To avoid this scepticism, this unmanly despair, I am forced to rebel against authority, and maintain the liberty of thought.

II. OF PROBABLE REASONING.

67. All reasonings other than those already discussed lead to probable conclusions only; partly because they are all ultimately based upon facts known by experience, which is always fallible, for facts may be inaccurately observed, and even what once was fact may cease to be so; partly because wrong conclusions may be drawn from those facts where the reasoning is not demonstrative. In short, errors may arise from inaccuracy either in Observation, or in Reasoning.

68. Although all probable reasonings (and many demonstrative reasonings also, as we have seen) are based ultimately upon facts, real or supposed, yet they do not all arise immediately from the ex-

perience of particular things, which alone is properly Experience. Some reasonings, no doubt, do so spring, but others start from general principles or general facts, which had been inferred from many particulars by a previous mental operation. Hence a well-marked distinction between the INDUCTIVE and the DEDUCTIVE method. The one *brings in* particular facts in order to establish a conclusion, whether general or particular; the other, from some general proposition deduces or *draws out* a less general proposition. Induction may proceed not only from particulars to particulars, and from particulars to the general, but also from the general to the *more* general; while Deduction always proceeds from a general proposition to one *less* general. The latter is often called *a priori* reasoning, in opposition to the former styled *a posteriori;* though, in reality, the general proposition from which it starts be known only by induction based upon experience. For instance, when we speculate on the advantages or the disadvantages of any form of civil government, we may either consult the history of nations, in order to determine the result of such a scheme in times past, and then conclude that a similar result would follow now; and here we reason from immediate experience or *inductively:* or we may draw our inferences from the acknowledged principles of human nature; and in this case we reason from remote experience or *deductively;* for the principles of human nature are known to us only by experience.

69. It is evident that both these methods of inquiry lead only to probable conclusions, strictly so called. For, besides inaccurate observation and false accounts of facts, the connection between the Premises, namely, a number more or less of particular effects, and the conclusion that such a thing is the Cause of these effects, and of innumerable others similar, is not irresistible; and even were it irresistible in the cases observed, yet we never could be sure that the cases actually tried, and those not tried, were in all respects similar. And though the principles established by induction may be true *generally*, yet, as they cannot be proved *universally*, as their limits are not defined with perfect accuracy, and as there may be other and counteracting principles at work, therefore reasoning from these general principles cannot lead to conclusions absolutely certain; though, when the probability is very great, it commonly passes for a certainty.

70. Instance of a general law of nature established by Induction. From the fall, first of an apple, afterwards of other bodies, to the earth, Newton inferred, first, that all bodies tend to the earth, and then that all bodies in nature tend to each other, the earth, the moon, the planets, the sun, and all that therein is, in a word, that gravitation is universal.

Instance of a general practical maxim obtained by Induction. "For this, Thou shalt not commit adultery, Thou shalt not kill, Thou shalt not steal,

Thou shalt not bear false witness, Thou shalt not covet, and if there be any other commandment, it is briefly comprehended in this saying, namely, Thou shalt love thy neighbour as thyself." [1]

The superiority of a standing army over a militia, as to warlike efficiency, is proved *inductively* from the history of many nations, particularly of the ancient world, when standing armies were not general, and when those who had them conquered the rest; and *deductively* from the general principle of division of labour.

There is an antecedent improbability against miracles, founded on our experience of the general uniformity of the course of nature; but the truth of a particular miracle, as the raising of Lazarus, may be proved by particular facts in evidence. Here we have first a *deduction*, then an *induction*. The necessity, or, at least, the utility of local government in general, is proved *inductively* from the history of particular nations, some being the seat of government, others ruled as provinces; and the same conclusion is arrived at *deductively* from the known principles of human nature; such as, that persons on the spot better understand and are more interested in their own affairs than strangers. Again, the utility of local government in general being proved, the expediency of the same in a particular case, as that of

[1] Romans xiii, 9.

Ireland, follows by *deduction;* and a like conclusion may be established *inductively*, by referring to the particular history of Ireland.

Take another specimen of *deduction.* A man is accused of a certain crime, say of murdering another. Starting from certain general principles of human nature, or from the previous good character of the individual in question, we argue that it is very improbable that he committed the murder. This is often called *a priori* reasoning, because it draws a conclusiou *prior* to an examination of the particular facts of the case; though, in reality, it is founded on experience, on experience of human nature in general, and of the individual more especially. Afterwards, particular facts are brought forward to prove that he actually committed the deed; and from these facts we draw our particular conclusion *inductively*,

Let us now take an illustration from comparative anatomy. Suppose that a scientific zoologist finds in the earth a fossil tooth of some unknown animal, of a species probably extinct. He at once decides from its form that it was the tooth of a quadruped, and of a carnivorous quadruped. This one fact combined with a general principle will give him an insight into the whole structure of the animal. The general principle is, that a carnivorous animal must have such a conformation as is necessary for the existence of life supported on raw flesh. From this one principle an immense

number of consequences will flow. First, the animal in question must have had a jaw fit for laying hold of objects with force, it must have had the condyles or sockets of the jaw adapted for powerful motion up and down, not sideways as in graminivorous animals; it must have had large temporal muscles, and a prominent zygomatic arch to allow room for those muscles; it must have had strong muscles to raise the head and carry off its prey; it must have had claws to seize upon prey, and much mobility in those claws; also a forearm endowed with great facility of motion, and a formation of bones corresponding; a strong shoulder-blade; hinder limbs fitted for rapidity; much flexibility of vertebræ: peculiar organs of digestion; and very many other particulars too numerous to mention. All these may be deduced from the one general principle mentioned above. No doubt, all these conditions of carnivorous life were learnt beforehand from experience, but it was reason that discerned them to be indispensable, and not merely co-existent, and drew the general inference accordingly; so that subsequently the principle might be applied to *deduce*, prior to actual experience, what we should expect in the new case. Now let our Zoologist stumble upon a fossil cloven hoof, also of an unknown species of animal, and he will instantly pronounce that the animal had been ruminant; but why? Not as in the former case because he can see any connec-

tion between cloven hoofs and rumination, but simply because all cloven-footed animals hitherto known are ruminant. This is an argument, drawn not from a general principle, but from particular instances only; and we cannot say positively, as in the former case, that all cloven-footed animals are, much less must be, ruminant, because we can see no connection between the two, but only, all hitherto observed are so. This, then, is an Inductive argument.

71. What is called Analogical Reasoning is no distinct species, but only a variety of inductive reasoning. It may be called Indirect Induction. No better specimen of this can be given than the general strain of the Reasoning contained in Butler's Analogy, of which I shall here give one or two instances. It is supposed to be known by experience that even here there is a moral government, that the good, generally speaking, if not more prosperous outwardly, are more happy inwardly than the wicked. Hence the inference that the same will hold good hereafter; in other words, that the future state will be one of rewards and punishments according to desert. Again, natural religion is attended with great difficulties; hence it is probable from analogy that a system of revealed religion shall not be altogether free from them.

Our own existence, particularly the union of soul and body, is a great mystery, and seems even

to involve contradictions; surely, then, it is probable that religion shall have mysteries. The soul, from the nature of Spirit, can exist in no place; but we believe that it is united to our body, which does exist in some place; that where our body is, there also is our soul, and nowhere else. Is the mystery of the Trinity more incomprehensible than this?

72. Since Analogy signifies likeness or resemblance, (especially likeness of relation), and analogical reasoning is reasoning from like things to like; wherein, it may be asked, lies the difference between this and other varieties of Inductive reasoning? For all induction is from similar to similar, whether from similar causes we infer similar effects, and *vice versâ;* whether from likeness in some part of the chain we infer likeness in the whole chain, without knowledge of causes, as when, from certain appearances of the sky we predict, perhaps long beforehand, the coming weather; whether from certain parts we infer the co-existence of other parts, as the experienced anatomist, who, from a single bone, or even fragment of a bone, can construct the whole animal. Inductive reasoning is a species, of which Analogy is a variety; nor can we lay down any very definite distinction between it and other varieties. Only, when along with the similarity there is also a good deal of difference, then we call the reasoning anological; as when we reason from the

order of things in this life to that in a future state.[u]

73. From the above examples and observations the distinction between the Inductive and the Deductive method of inquiry seems to be clearly established. But we have not yet noticed that the term *Induction* comprehends two distinct mental operations; first, the observing, the comparing, the selecting of facts; and secondly, drawing a conclusion from them. Great Judgment may be required in the first operation, but the second alone is properly Reasoning. The detail of facts, moreover, may fill volumes, but the reasoning in Induction is always very short: for, when from the particular facts we have drawn our general conclusion directly, inductive reasoning is ended. Then Deduction begins, and the chain of reasoning may be prolonged indefinitely. Thus there is much more of reasoning in deduction than in induction, nay, the former is all reasoning, the latter only in part.

74. As a specimen of a chain of deductive reasoning, take the following:

The capacity of the mind is limited;

[u] For an admirable specimen of Analogical Induction, see the opening chapters of Paley's Natural Theology. Never was argument better put. Let us not forget that when we allow design, we allow a designer; and who can help seeing design in all around him? The reasonings of Natural Theology lie in a nutshell; the facts fill the universe.

Therefore the more it is occupied with one thing, the less can it be occupied with another;

Therefore the more it is taken up with intellectual pursuits, the less can it be taken up with the affections, and *vice versâ.*

Therefore, again, the more it is occupied with general benevolence, the less can it be occupied with private attachments, and *vice versâ.*

In this chain of reasoning each proposition is less general than the preceding, and each is an inference from what went before. In induction there is no such chain, the reasoning consists but of one link.

75. Since it is the reasoning process alone that is common to Induction and Deduction, in this only can they admit of comparison. Let us then examine that process in both cases, in order to determine what similarity or what difference may exist between them.

76. In Deductive Reasoning, having stated a general proposition, our object is to show that the particular case which we have in view is really comprehended under the general rule; so that if the one be true, so must the other. Thus, our general proposition being that "the more the mind is occupied with one thing, the less can it be occupied with another," we then consider that intellectual pursuits are an occupation; and again, that the affections are another occupation; whence it appears that the less general proposition, "the more the

mind is occupied with intellectual pursuits the less can it be occupied with the affections," is a case of the general rule, or comprehended under it.

77. Now, how stands the case with Inductive Reasoning? Suppose a traveller in a new country to meet with a troop of animals hitherto quite unknown to him; that he catches one, kills, and dissects it with the skill of a practised anatomist. One specimen contents him, for he confidently believes that all the rest, so like outwardly, are also alike inwardly. But why does he believe so? That is the question. The mental process by which he arrives at the conclusion seems to be simply as follows. Here is an animal of a certain make. There are many other animals, to all outward appearance exceedingly like to this, and to each other. *Therefore*, all these animals are alike within as well as without.

78. The above is all of which the mind seems to be conscious in inductive inference; but as, on reflection, there is no necessary connection between the Premises and the Conclusion, for we certainly cannot see that resemblance in certain particulars infallibly proves resemblance in others; thereupon logicians suppose that a general proposition must be understood, in order to justify the inference. This general proposition is, that *nature is uniform in her operations, and never deceives us by uniting great differences with striking resemblances*, and from this proposition, or one similar, the conclusion is sup-

posed to be drawn *deductively*. According to this theory, then, the reasoning part of the process in Induction is only a concealed Deduction.

79. The supposition that the foregoing general proposition, or one similar, is actually present to the mind in every case of inductive inference, and that from it the conclusion is drawn, seems not to rest on any sufficient evidence. It may be necessary to reduce reasoning to an uniform system, it may be necessary on subsequent reflection to satisfy the rational mind, it may be required in Logic, but not in Metaphysics. As a matter of fact, we believe that minds which have never risen to any such very general proposition still draw conclusions inductively with more or less accuracy, that, when they have seen a cause followed by a certain effect to-day, they will expect a like cause to be followed by a like effect to-morrow. This depends upon a principle of human nature, that when we see resemblance in one or more particulars, then we expect resemblance in others. Such is the real *Cause* of Inductive inferences, a cause which influences those who have never heard or dreamt of the Logical *Reason*. This is a subsequent generalization of a very high order, which justifies to our Reasoning faculty what at first was independent thereof.

80. That there is a tendency in human nature to expect like effects from like causes, and *vice versâ*, or, more generally, where we observe resem-

blance in certain particulars, there to look for resemblance in others, cannot be doubted; but it may be questioned whether this tendency be original or derived, instinctive or acquired; and if not original, from what it is derived. Hume maintains that it is derived from CUSTOM. When two phenomena have often been observed in conjunction, the mind passes readily between the two, and when it observes the one cannot help expecting the other. "All inferences from experience, therefore, are effects of Custom not of reasoning."[x] This at first seems a plausible explanation, but it is refuted by the fact that *one* instance of Sequence or of Co-existence is often enough to induce us to expect a similar Sequence or Co-existence in future. The child who has once been burnt by fire needs no repetition of the experiment to avoid the flames ever after. In fact, the tendency is to look for more uniformity in nature than there really is, and to suppose that what has happened once will happen again and again. Subsequent experience, no doubt, corrects our errors, but the natural tendency is to expect the recurrence of events which had been only casually united, and united but for once. Now Custom supposes Repetition, and therefore the explanation fails.

81. If these inferences from experience be not the effect of custom, can they be traced to

[x] Essays Vol. II. Sceptical Solutions of these doubts.

anything else? The other supposition, mentioned by Hume and combated by him, is that they may be the effect of Reasoning. This language, however, is very inaccurate. An inference may or may not be entitled to the name of Reasoning; but to say that it is the effect of reasoning is unintelligible. The only real question is, whether these inferences from experience be properly reasoning, or not? If they be instances of reasoning, then we have nothing more to ask; but if not, we shall still have to inquire what they are, and whether they can be otherwise accounted for, since they cannot be owing to Custom.

82. When the child has once burnt his finger in the candle, when he has once seen a man drowned in the river, he will shun the flame and deep water ever after. He must therefore believe that, as in the past, so in the future, flame will burn and water drown. But why does he so believe? Is it by reasoning? Not to mention that the reasoning powers are not developed at a very early age, what connection do we discern between the fact, this has happened once, and the inference, a like effect will ever after ensue in similar circumstances? Yet, in cases such as the above, the inference is drawn at once, without hesitation, by persons of all ages, and every degree of intelligence, by infants, almost by idiots. Surely this is not like reasoning. Reasoning power comes upon us by degrees, is frequently at fault, exists not at

all in infancy, grows slowly, often decays prematurely; and varies excessively in different individuals at all ages; but simple inferences from experience are early, certain, uniform, and universal. It may be said that all this depends upon the simplicity of the reasoning. But point out to me any reasoning, universally allowed to be so, that is manifest to all ages and all degrees of intelligence. Mathematical reasoning is very simple, and admits, when comprehended, of no doubt; but many grown persons, not to say children, have never been able to master a proposition in Euclid. The early preservation of the human race was of too great importance to be left to the tardy development of the reasoning powers. A facility of drawing simple inferences without reasoning was necessary to the very existence of the human race, as well as of other animals. There can be no doubt that animals do draw their inferences as well as man, that, after a little experience, they avoid fire and water and other things that may harm them; but shall we say that in so doing kittens and puppy-dogs reason? It may be that animals are capable of reasoning to a certain extent, but we need not therefore allow that they can infer nothing without reasoning.

It has often been asked whether animals have Reason. That many animals have, I cannot doubt, for these simple inferences I attribute to Reason, though not to reasoning power.

The tendency to draw such inferences is certainly an Instinct, but Reason seems necessary in order to draw them correctly. The Idiot cannot so draw them, and therefore he cannot take care of himself, because he has no Reason; but the madman can, for his Reason is only partially subverted. His danger arises not from ignorance of common consequences, but from a wish to destroy himself or others. Irrational inferences, such as that Tenterden Church steeple was the cause of the Goodwin Sands, show both the Instinctive tendency, and the necessity of Reason as a guide to that tendency.

It is only by a misconception of the nature of Reason, and by confounding it with Reasoning, that the question can have arisen whether animals possess Reason. That they draw innumerable inferences from experience, and that correctly, there is no doubt: and if so, they have Reason sufficient to guide the Instinct, the natural tendency to draw inferences right or wrong. These two must not be confounded; the tendency to infer that things once conjoined will be conjoined again and again; and Reason, which informs us when such conjunctions may be expected, when not; for every event is accompanied casually by innumerable events, some immediately before, some contemporaneous, some immediately after.

83. I must therefore conclude that there are simple inferences from experience which are not

instances of reasoning. What then are we to think of these inferences? Is the word inference properly applied to them? If so, then inference does not always imply reasoning. This is clear; but let us examine their nature.

84. Our belief in the uniformity of nature belongs to the same order of phenomena as our belief in the existence of the material world. This latter belief may also be called an inference, an inference from certain sensations that are not material, and bear no resemblance to matter, and from which, therefore, no conclusion as to the existence of matter could have been drawn by reasoning. Where one phenomenon leads to belief in something else, there, perhaps, the term inference may be employed; though I allow that it is more properly used where the mind discerns some connection between premises and conclusion, where the Reason is convinced, not merely an effect produced. But let that verbal question be decided as it may, whether our belief in the material world, and our belief in the uniformity of nature, be called inferences or not, they are certainly not instances of reasoning. What then are they? They are Original articles of belief, which arise in the mind on certain appointed occasions. They are not derived from Custom or Repetition, for no repetition of sensations can give of itself a knowledge of matter, any more than a single instance; and we have seen that our belief in the

uniformity of nature often arises from a single case: they are not acquired or learnt by Experience; for, though experience makes us acquainted with sensations, it can never inform us that they depend upon an outward material cause; and though experience, in a wider sense, may teach us what is now passing around, yet it cannot instruct us that similar events will recur in future. Between the knowledge, this has been once or oftener, and the subsequent belief, this will always be, there is a wide gulf, which we must leap across, for we never can bridge it over. The inference, if such we call it, is not logical, for we can see no connection between premises and conclusion, but it is often irresistible. This, then, like belief in the existence of matter, is a primary article of our creed, totally independent of reasoning; neither self-evident, nor learnt by experience; for experience is only of the past. No doubt, experience is the occasion on which the belief arises, and if the occasion, then an auxiliary cause; but the principal cause lies deep in the mind predisposed to adopt the belief. This belief, at first dormant, is roused and developed by the earliest exciting cause.

85. But if these inferences from experience be not reasoning, why do we talk of Inductive reasoning at all? All inductive conclusions are founded on our belief in the uniformity of nature, and if this belief be independent of reasoning,

must not all Induction be so likewise? This difficulty seems never to have been fairly met by philosophers, and their language on the subject is variable, and apparently contradictory; for at one time they assert that inferences of the kind in question are not "effects of reasoning," or, are not "grounded upon reasoning," while at another they talk of experimental or inductive as a branch of probable reasoning. Now, can these two statements be reconciled?

86. We have seen that the natural tendency to associate phenomena is so strong that at first we often suppose a constant, where there is only a casual, conjunction. Afterwards, however, experience corrects this tendency, in some men more, in others less, according to their opportunities or their attention, by showing where there is, and where there is not, uniformity. We gradually learn that perfect similarity in one respect is essential to similarity in another, that causes must really be like, in order that effects may also be alike. Now, in determining the degree of similarity between two cases, much judgment may be required, where the resemblances are complicated; and thus a foundation is laid for reasoning. Where the cases are very simple, as in the common effects of fire and water, there little judgment is necessary, and the inference is immediate, but, in difficult cases, the immediate belief is often wrong, and judgment must come into play. In

short, we start with a natural tendency to belief, but, after a time, it leaves us to the conduct of Judgment. What judgment does, is to show us the similarity or the dissimilarity of two cases, to afford ground for reasoning, which is built thereupon, and ends in a conclusion. The reasoning is very short, consisting but of one argument, which may be stated thus,

A has hitherto always been followed by B;

Here is a case exactly similar to A;

Therefore, A will again be followed by B; where the first proposition may be ascribed to Observation, the second to Judgment, the third to Reasoning.

87. Here then is the solution of the difficulty above suggested. In simple cases of inference from experience, the natural tendency requires little guidance; while, in the more complicated, Judgment and Reasoning are necessary. Natural tendency is content with one instance of co-existence or of succession, but Judgment, informed by experience, may require many. In simple cases, one instance is as good as a thousand, as in the cases of drowning and burning; but, in more complex phenomena, many observations, many experiments even, may be required to satisfy the judgment as to the existence of similarity or of dissimilarity, and thereupon to draw a conclusion.

88. It must be allowed that this species of reasoning differs considerably from those which

we have hitherto examined. In demonstrative reasoning we clearly discern the connection between the premises and the conclusion, we see that if the former be true, so *must* the latter; and even in probable deductive reasoning we are conscious that if the premises be well-founded, the inference is *probably* correct; but what connection do we see between the proposition, A has hitherto always been followed by B, and the inference A will again be followed by B? Yet the inference is always drawn, nay, is often irresistible, as much relied on as the conclusions of geometry. The only account that can be given of these inferences, is, that they depend upon a natural tendency, confirmed and corrected by experience. They may be called *Non-Intuitive*, in opposition to *Intuitive* inferences. If we cannot explain Intuition, neither can we account for Natural tendency. It might indeed be a question whether these non-intuitive inferences were or were not reasoning; but this we have already answered by showing that some are, and others are not entitled to that name. All men are agreed in giving the name of reasoning to certain inferences from experience, and we cannot fight against the universal sense of mankind on the subject of Metaphysics.

89. Mr. Bailey, in his very able work "The Theory of Reasoning,"[y] has suggested *Instinctive* as an epithet which might be properly applied to that

[y] The Theory of Reasoning, p. 25.

species of reasoning which we call *Probable*, and which he terms *Contingent*. But this would be a misapplication of the word *Instinct*. Nay, *Instinctive reasoning* appears to me very like a contradiction. Instinct and Reason, at least, are constantly opposed, and how can there be reasoning without reason? *Instinctive inference* might pass, if all inference be not reasoning, and then it would be opposed to *Rational inference*. But, strictly speaking, Instinct acts prior to all experience, as in bees, who, without any lesson, all build their cells in the form of hexagons; and as in some other animals, who avoid poisonous plants without trying them. Not so the child, who, before experience, does not know that water will suffocate or fire give pain, for children who have learnt no better will put their fingers into the candle. The inference afterwards drawn by them, even from a single experiment, is hardly *instinctive*, though the tendency to draw some inference is natural, universal, irresistible. We have seen, indeed, above, that though the tendency to draw inferences from past experience be instinctive, yet, to draw them correctly some degree of Reason is required, but not always Reasoning. Therefore we may divide Inferences from Experience into the Simple and the Complex, the former requiring Reason only in its most simple form, as a guide; the other embracing Reasoning according to the doctrine delivered in the previous pages.

90. Can any definite line be drawn whereby to

distinguish Simple from Complex inferences? The forming of general laws is always a case of Complex inference or Reasoning: but particular conclusions may be either Simple or Complex. To predict from certain signs the coming weather requires an effort of Reasoning, but surely no reasoning is required to foretell that the Sun will rise to-morrow. In these and innumerable other cases, the distinction is evident, but there may be others where it is doubtful. Most of our classifications are liable to this imperfection, and surely that most delicate piece of workmanship, the human mind, cannot be free from those fine shades, those imperceptible differences, which defy all discrimination. Perfectly to unravel so intricate a network may well baffle the subtlety of the acutest metaphysician.

91. As Inductive appears to differ widely from other reasoning, and as, moreover, the name of reasoning cannot be denied to it without doing violence to common notions and common language, an attempt has been made to make it accord more nearly with other species, by means of what I shall call a *logical fiction*. The endeavour to reduce Inductive reasoning to the syllogistic form has miserably failed, and could not but fail; for in Induction we do not start from an universal, or even from a general principle, but, on the contrary, conclude by one. The attempt to assimilate Inductive to probable Deductive reasoning has also failed, and for a like reason. In this I confess my own error, for

the latter attempt was made by myself in my Introduction to Mental Philosophy; and here I shall quote what is there written.

92. "Suppose a traveller in a new country to meet with a troop of animals hitherto quite unknown to him; that he catches one, kills, and dissects it with the skill of a practised anatomist. One specimen contents him, for he confidently believes that all the rest, so like outwardly, are also alike inwardly. Now what reason has he for this belief? The mental process necessary to justify this conclusion seems to me as follows. Here is an animal of a certain make. There are many other animals, to all outward appearance exceedingly like to this, and to each other. But, *nature is uniform in her operations, and never deceives us by uniting great differences with such striking resemblances;* therefore, all these animals are alike within as well as without."[z]

93. Now, the proposition in Italics is what I call a logical fiction. It has evidently been supposed in order to assimilate this reasoning to the deductive, which is based upon a general principle; in other words, for the sake of uniformity, that darling *Idol* of the human mind. But omit that proposition and we shall find no blank in the reasoning. The inference is as cogent as before, the conclusion as firmly established; though it be not in accordance

[z] Introduction to Mental Philosophy, p. 192.

with the rules of *ratiocinative* logic. Mr. Mill has well divided Logic into the ratiocinative and the inductive, thus allowing that there is a real difference between them. It is allowed that the above general proposition, or one equivalent, is never expressed, always understood. But what right have we to say that a proposition is understood if it be *never* expressed? In Logic as in Grammar, if in a certain case a proposition or a word be sometimes expressed, we may say, where a similar argument, or a similar phrase occurs, only without that one proposition, or that one word, there the proposition or the word is understood, reasoning from analogy; but when no instance can be shown of the full statement, the supposed ellipse is a mere fiction. Were we to assume that general propositions might be understood in reasoning though never expressed, we could affirm that even the syllogism was elliptical. Thus, taking any common example, such as, All men are mortal; James is a man; therefore James is mortal; we could say that the General Principle of the Syllogism, the *dictum* of Aristotle, is here understood, and that the reasoning in full would stand thus:

All men are mortal;

James is a man;

But whatever is predicated of a class can be predicated of everything comprehended under that class;

And it is predicated of the class men that they are mortal;

And James belongs to that class ;

Therefore, James (as a member of that class) is mortal.

But, after this lengthened statement, is the conclusion one whit more certain than before? And if not, must it not be considered as laborious trifling? But we have as much reason to affirm that the above general proposition is understood in every syllogism, as to assert that the general proposition relative to the uniformity of nature is understood in every inductive argument.

94. I grant that the general principle above stated may be drawn out or *educed*, as Mr. Bailey expresses it, from this and other similar cases of reasoning; that it is a generalization from particular instances; but to say that the conclusion can be drawn only by means of such a general proposition is a *totally* different assertion. In treating of demonstrative reasoning we mentioned the difference between generalization and analysis, a distinction which again applies to the present case. The doctrine that the above general proposition is an indispensable premiss of every Inductive argument, and therefore necessary to its validity, can, I think, be clearly disproved. For if a general proposition be required for the validity of every Inductive argument, how, I may ask, was that general proposition arrived at from which we are supposed to reason? It is allowed not to be self-evident; from simple instinct it cannot be derived, for no general proposi-

tion is instinctive; nor from simple observation, for observation is only of particulars; therefore it must be arrived at by the aid of reasoning from particulars. But, by the supposition, we cannot reason from particulars without a general proposition. Here, then, is a flat contradiction, and consequently the supposition is untenable. Were we to wait to reason until we had framed general propositions concerning the uniformity of nature, we should never reason at all about matters of fact; for those propositions cannot be arrived at without reasoning. They are generalizations from experience by reasoning.

95. The object of general induction is to establish a general conclusion, by means of instances so divested of peculiar circumstances as to obviate the mistake of stating as general what is only particular. One inference would be as good as a thousand, if we could be sure that it was quite in point, that is, free from any peculiar circumstances, and it is only because we are not sure of this, that we must multiply instances. The grand object then is to prove similarity, perfect or at least sufficient similarity, between cases observed and others not observed. The uncertainty of Induction depends partly on the difficulty of determining the degree of similarity between cases observed and others which have not been observed in all points, partly on the mistakes to which the original observation was liable. In a word, we may observe ill in

the first instance, or the new cases may not be in all respects similar to the old.

96. Nothing more simple, nothing more brief than the reasoning, properly so called, in Induction; the grand difficulty lies in the collecting, comparing, and scrutinising of instances. For this, great patience as well as great judgment may be required. The tendency is to infer too hastily. To draw an inference is easy enough; but to know when we are justified in drawing it, is the point. It is not as in other reasoning where we see at once whether the premises justify the conclusion; for this reasoning is based upon natural tendency to believe, not upon Intuition, and natural tendency impels us to infer at once, rather than to wait and infer rightly. Subsequent experience, attention, and judgment, are necessary to correct the errors of the natural tendency. We may be also greatly assisted by a system of rules applicable to the business of Induction, in other words, by Inductive Logic, if the word Logic may be used in a sense so extensive, and be not confined to Logic proper, or pure Logic. Such a system of rules we have in the Second Book of the Novum Organum, the triumph of the genius of Bacon. This subject, after a long interruption, has been taken up again by Mr. Mill in his System of Logic.

97. Finally, the differences between Induction and Deduction may be thus summed up.

First, the facts from which Induction springs are never more general than the conclusion;

Secondly, the conclusion always follows at once from the facts, without the intervention of a general principle.

Thirdly, the inference is non-intuitive.

Fourthly, there is no such thing as a long chain of inductive reasoning, as there may be of deductive, where one inference may follow upon another till we get far away from the original premises; whereas on the other hand,

Fifthly, in Induction, the detail of facts may fill volumes. There is, in short, in Induction far less reasoning than in Deduction, the reasoning process consisting, in the former, of one step only.[a]

Lastly, since particulars occur first to the mind, it follows that the Inductive must precede the Deductive process. The general propositions from which the latter sets out must have been established by a previous process of inductive generalization, well or ill performed. Thus, in the order of time, induction comes before deduction.

98. By many, Bacon has been called the inventor of the Inductive method, a method, however, as old as the creation, which that eminent genius only brought more into notice, restored, improved, illustrated, and reduced to system. This system is contained in the *Prærogativæ In-*

[a] Take, as an instance of the one, Malthus on Population, who fills three volumes with facts in support of his principle; of the other, the writings of Ricardo and James Mill on Political Economy.

stantiarum, which fill the second Book of the Novum Organum. The two methods, the Deductive and the Inductive, are well described by him in the following Aphorism. "There are and can be but two ways of seeking and finding out truth. The one from sense and particulars flies to the most general axioms, and from these principles, firmly established, finds out and judges of intermediate axioms; and this is the way now in use. The other raises axioms from sense and particulars, ascending continuously and gradually, so as at last to arrive at the most general, which is the true but untried way."[b]

99. Here we may remark a difference in form between Demonstrative and Probable Reasoning. We have seen, from an examination of instances, that demonstrative reasoning consists of three propositions at least; but we did not formerly observe that, from the nature of the case, it *must* have at least three propositions. For were a conclusion inferred infallibly and directly from a single proposition, then it must be necessarily and evidently implied in that proposition; and if so, the conclusion, so called, is not arrived at by Reasoning. But Probable Reasoning may consist of only two propositions, because if an inference can be drawn from a single proposition and drawn only probably, then it is not evidently compre-

[b] Novum Organum. Aph. 19. *Translated.*

hended under or implied by it, and therefore this *is* reasoning. And, that an inference may be drawn from a single proposition is proved by the following example:

Trade in general ought to be free;

Therefore the Corn Trade ought to be free;

which is a case of probable reasoning.

But all Trade ought to be free;

Therefore the Corn Trade ought to be free,

is not reasoning; for the second proposition is evidently comprehended under the first; no reasoning is required to draw it out. Perfect Reasoning, therefore, or Demonstrative, must consist of three propositions at least. Imperfect or Probable Reasoning, of the Deductive kind, may have only two. As for Induction, three is the number of propositions which it contains, as we have already seen, and they may be expressed generally thus:

A has hitherto always been followed or accompanied by B;

Here is a case to all appearance exactly similar to A;

Therefore it will be followed or accompanied by B.

The simplicity and uniformity of this species of reasoning are here apparent.

SECTION THIRD.

ON GENERAL PRINCIPLES OF REASONING.

1. We have seen (Section first of this Chapter) what is common to all Reasoning, but we do not attempt to establish one universal principle of cogency in reasoning, because we do not believe that any such principle exists. We have seen that reasoning is of different kinds, first Demonstrative and Probable, and then, that Probable reasoning is either Inductive or Deductive. It is unlikely that the same General Principle of cogency should run through these different species; and a particular examination of each will confirm this supposition. Even in mathematical reasoning, which embraces but one kind of relation, clearly distinguished from all other relations, and having its own differences also clearly marked out, there is more than one fundamental principle or axiom. How then can there be but one principle common to all reasoning, Probable as well as Demonstrative? The case of Mathematics proves, at least, that all reasoning is not an exemplification of one and the same principle. "Things which are equal to the same are equal to one another," and "if equals be added to equals the

wholes are equal," are not one axiom but two; and the axiom peculiar to Geometry, "two lines cannot enclose a space," is surely different from both.

2. But do we clearly understand what is meant by a *General Principle of Reasoning*, or *Principle of Cogency in Reasoning?* It is a general truth, of which each inference is a particular instance, a truth either self-evident and necessary as in mathematics; or not self-evident, not necessarily true, but undisputed, as in inquiries about matters of fact. In a particular instance of such a principle the validity of every inference consists, and upon this instance conviction depends. Considered in respect to reasoning itself, the Principle, by means of the particular instance, is an invariable constituent or element; in respect to the influence on the mind of the inquirer, by the same means, a Cause; for, as we have shown elsewhere,[c] a Principle may be either Constituent or elemental, or else Causal.

3. We must not confound General Principles of Reasoning with the General Principles of any Science. The latter are the leading or most important General Propositions from which the many less general truths of each Science are deduced; as, in Political Economy, the Principle of Division of Labour, the Principle of Popula-

[c] See the Author's "Introduction to Mental Philosophy," Part I. Article PRINCIPLE.

tion, of Free Trade, etc. When any application is to be made of these principles, they are always stated, and conclusions drawn from them accordingly. But the General Principles of Reasoning are never stated, for they are the very elements of which Reasoning itself consists; and we cannot both Reason on any subject and analyze the process of Reasoning at the same time. It is only when Reasoning itself becomes the subject of our inquiry, that we analyze reasoning. The axioms of mathematics are never stated in the course of our reasonings in that Science, for the Science is not deduced from them; but every mathematical argument is a particular instance of one or other of the Axioms. Thus, the reasoning A is equal to B, and B to C, therefore A is equal to C, is an instance of the axiom "Things which are equal to the same are equal to one another"; and so in every other case. These Axioms, then, are the very elements or constituents of the reasoning, not *data* from which reasoning proceeds. So it is in probable reasoning. The principles of the reasoning itself are never stated, whether in induction or in deduction; but each argument is an exemplification of those principles of which the reasoning consists; such as, in the one case, that Nature is uniform in her operations; in the other, that what is allowed to be true in general will be true in particular instances.

4. There is then no one universal principle of

cogency in reasoning, but there are several general principles, one or other of which pervades all reasoning; in other words, each instance of reasoning is a particular exemplification of some one principle common to it, and to innumerable other instances of the same kind; but every argument is not an example of the same principle. No reasoning, then, can be said to be drawn from these principles, but all reasoning embraces a particular instance of one or other of them. They are not the formal Premises of an argument, but the very essence thereof.

5. Demonstrative reasoning seems to comprehend a greater number of these principles than Probable reasoning; though this may be only in appearance, owing to the circumstance that mathematicians have been at more pains to state the axioms of their Science than writers on other subjects. No less than twelve axioms are enumerated in Euclid's Elements of Geometry. Of these, some are very much alike; such as, "if equals be added to equals, the wholes are equal," and "if equals be taken from equals, the remainders are equal;" also "if equals be added to unequals, the wholes are unequal," and "if equals be taken from unequals, the remainders are unequal." "Things which are double of the same, are equal to one another," likewise closely resembles "Things which are halves of the same are equal to one another;" yet all these are considered as

distinct axioms. Moreover, "The whole is greater than its part" is unworthy the name of axiom, for it is an identical or trifling proposition, in which nothing is affirmed not contained in the meaning of the Subject. Whoever understands the signification of the word "whole" must know that it is greater than its part. Thus, the number of these axioms has been enlarged as much as possible, and, in one instance at least, improperly. All these axioms relate to Quantity, and to Co-existence alone; and to them the following may be added, as applicable to demonstrative reasoning, applied not of necessity to Quantity:

1. If the first always co-exist with the second, and the second with the third, then will the third always co-exist with the first.

2. And *vice-versâ*; If the first never co-exist with the second, and if the second always co-exist with the third, then will the third never co-exist with the first.

Lastly, among the axioms proper to demonstrative reasoning, we may reckon the *Dictum de omni et nullo*, the syllogistic axiom, which, so far as applicable to any argument, can be only to a demonstrative one, as to a certain case of Mathematical reasoning already mentioned. Since, however, this *dictum* is not a proper axiom, as we before observed, but only a verbal proposition, a definition of a class, the reasoning which exem-

plifies it can be called such rather by courtesy th.. by right.

6. We have seen that one general axiom pervades all probable Deductive Reasoning, namely, "whatever is true in general must be true in particular cases, provided those cases be in point," a palpable truism. The whole difficulty lies in establishing the fact that the case really is in point. That granted, the inference is irresistible. The relation here traced is evidently one of comprehension, and so included under Co-existence.

7. One general axiom also pervades all Inductive Reasoning, viz., that there are uniformities in nature, uniformities of Co-existence, as well as of Succession, if we could but find them out. The axiom, however, admits of modifications, according to the nature of the subject investigated. Sometimes it assumes this form: Two or more things, which resemble each other in many observed particulars, will be found to agree in other non-observed particulars. From the appearances of agreement we may infer, either that the composition or internal arrangement of the things in question is similar, or that the changes which they undergo or produce are similar. The relations thus traced are either of co-existence or of succession; and they are reached by means of Resemblance. Resemblance is the foundation, not only of all classification, and hence of the descriptive sciences or natural history, but also of rea-

sonings concerning cause and effect, and therefore of Philosophy. Moreover, it is the peculiar office of the Fancy to trace relations of resemblance, not so much for the sake of truth, as of effect or emotion. Fortunate, then, is that mind which is alive to relations of resemblance, whether it thread the mazes of Science, or follow the flowery paths of eloquence and poetry; and valuable is that memory wherein things suggest others from similarity, and not from mere contiguity in place or in time.

8. Where human testimony is in question, the above axiom takes a different form, and may be expressed thus: Men will speak the truth when they have no motive to utter falsehood. This uniformity in human nature we believe at first instinctively, even without the reservation; and experience confirms our belief, only with the reservation. Whenever we assent to testimony, we confess this belief in a particular instance, and whenever we reason from testimony, we must suppose it to be credible.

9. Besides these, which are properly called *Principles of Reasoning*, because one or other of them runs through every argument, there are *Maxims* applicable to inductive research, and of great use in directing reasoning, which may be therefore called Inductive maxims. Such are the following:

1. Every effect has a chain of causes.

Therefore one cause does not necessarily exclude another, forming a different link in the same chain.

2. One effect may have many concomitant causes.

Therefore one cause does not necessarily exclude another, acting even simultaneously.

3. An effect may be prevented, not merely by the absence of the cause or causes proper to it, but also by opposing causes. *Therefore* the absence of an *effect* proves not the absence of a *tendency*. Let these suffice as specimens of Inductive maxims and their corollaries. They relate exclusively to relations of Succession.

10. To conclude; the object of Reasoning in general may be said to be to prove that two or more things co-exist, or do not co-exist; or that two or more things succeed, or do not succeed each other, generally, if not invariably. The object of Science, especially, is to determine the *permanent* or *invariable* co-existence and succession of things, partly by direct observation, and where that fails, by reasoning and inference. Where one thing is known certainly to exist, there to expect another along with it; or where one thing is ascertained, to look for another after it; such are the anticipations of human science.

THE END.

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